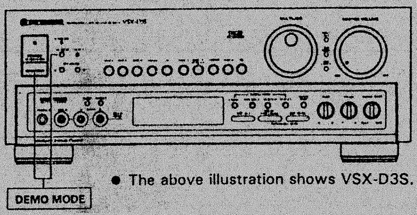
PIONEER®
The Art of Entertainment

Service Manual



• The above illustration shows VSX-D3S.

ORDER NO.
RRV1360

AUDIO/VIDEO STEREO RECEIVER

VSX-D3S
VSX-99

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model		Power Requirement	The voltage can be converted by the following method.
	VSX-D3S	VSX-99		
KU/CA	○	○	AC120V	—
SD	○	—	AC110V/120−127V/220V/240V	With the voltage selector

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1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols ▬▭ (fast operating fuse) and/or ▬▭⊠ (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible ▬▭ (fusible de type rapide) et/ou ▬▭⊠ (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

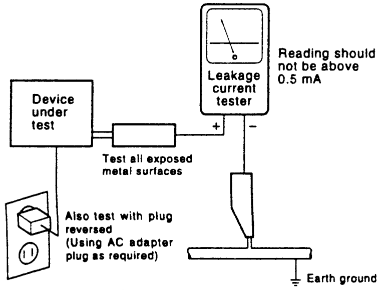
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Leakage current tester
Reading should not be above 0.5 mA
Device under test
+
−
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage , etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

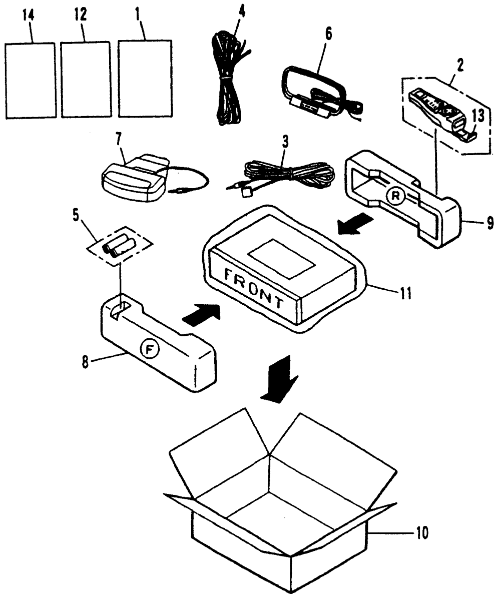
2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

2.1 PACKING (for VSX-D3S/KU/CA)

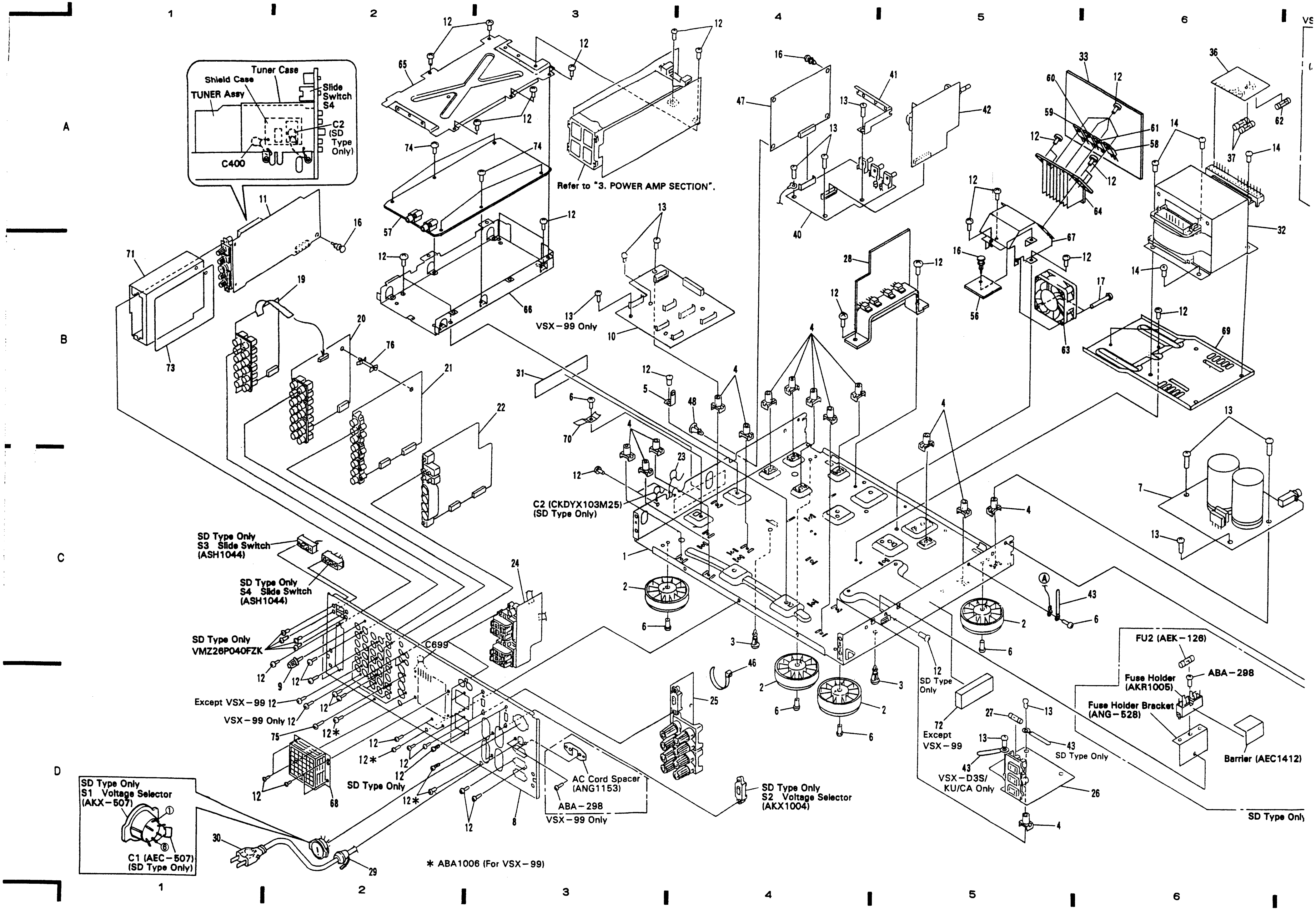
Mark	No.	Description	Parts No.
	1	OPERATING INSTRUCTIONS (English)	ARB7050
	2	REMOTE CONTROL UNIT (CU−VSX097)	AXD7055
	3	MINI REPEATER	ADF1002
	4	FM ANTENNA	ADH1004
NSP	5	BATTERY (R6P, AA)	AEX−010
	6	LOOP ANTENNA ASSY	ATB1005
	7	MAIN REPEATER	AXF1079
	8	FRONT PAD	AHA7056
	9	REAR PAD	AHA7057
	10	PACKING CASE	AHD7197
	11	PACKING SHEET	AHG1021
	12	ATTENTION SHEET (READ BEFORE USING) (English/French/Spanish/Chinese)	ARM7007
	13	BATTERY COVER	AZN7187
	14	ATTENTION SHEET (AC-3) (English/French/Spanish/Chinese)	ARM7008



2.2 EXPLODED VIEWS (for VSX-D3S/KU/CA)

1. EXTERIOR

Mark	No.	Description	Parts No.
NSP	1	CHASSIS	ANA7025
	2	FOOT ASSY	AMR2414
NSP	3	PCB HOLDER	AEC1097
NSP	4	PCB MOLD	AMR1525
	5	L TYPE HOLDER	ANG1903
	6	SCREW	ABA1009
	7	POWER SUPPLY ASSY	AWZ7769
	8	REAR PANEL	ANC7250
	9	TERMINAL SCREW	AKE−031
	10	CONNECTION ASSY	AWZ7633
NSP	11	TUNER ASSY	AWE1140
	12	SCREW	ABA−298
	13	SCREW	ABA1018
	14	SCREW	ABA1053
	15	SCREW	BPZ30P060FZK
	16	RIVET	AMR1066
	17	SCREW	BPZ30P350FZK
	18	....	
	19	AUDIO FUNCTION ASSY	AWZ7796
	20	A/V FUNCTION ASSY	AWZ7636
	21	VIDEO FUNCTION ASSY	AWZ7640
	22	S+SR, MR, IR ASSY	AWZ7647
	23	CAPACITOR (C400)	CKDYF102Z50
NSP	24	R.C SP. ASSY	AWZ7628
NSP	25	FRONT SP. ASSY	AWZ7625
	26	PRIM ASSY	AWZ7962
⚠	27	FUSE (10A/125V, FU1)	AEK1035
	28	AC-3 REG. ASSY	AWZ7798
⚠	29	STRAIN RELIEF	AEP−113
⚠	30	AC POWER CORD	ADG1146
	31	65 LABEL	ORW1069
⚠	32	POWER TRANSFORMER (AC120V, T1)	ATS7080
	33	REG ASSY	AWZ7656
	34	....	
	35	....	
NSP	36	TRANS ASSY	AWZ7720
⚠	37	FUSE (3.15A/125V, FU3, FU4)	AEK−124
	38	....	
	39	....	
	40	TONE ASSY	AWZ7644
	41	VOLUME HOLDER	ANG1902
	42	AC-3 VOLUME ASSY	AWZ7655
	43	BINDER	AEP−215
	44	SCREW	VMZ30P060FCU
	45	....	
	46	BINDER	AEC−093
	47	JOINT ASSY	AWZ7648
	48	PCB HOLDER	AEC1534
	49	DISPLAY PANEL	AAK7162
	50	JOG DIAL	AAB2224
	51	VOLUME KNOB	AAB7060
	52	BALANCE KNOB	AAB2226
	53	BADGE	AAM1058
	54	BONNET	ANE7077
	55	SCREW	FBT40P060FZK
NSP	56	PIECE ASSY	AWZ7964
	57	AC-3 ASSY	AWX7016
	58	REGULATOR IC (IC2251)	NJM78M15FAS
	59	REGULATOR IC (IC2258)	NJM78M56FAS
	60	REGULATOR IC (IC2257)	NJM7812FAS
	61	REGULATOR IC (IC2252)	NJM79M15FA
⚠	62	FUSE (2A, FU5)	AEK−122
⚠	63	FAN MOTOR	AXM7005
NSP	64	SUB RADIATOR A	ANH7020
	65	CASE A	ANG7035
	66	CASE B	ANG7036
	67	DUCT COVER	ANG7037
NSP	68	FINGER GUARD	ANG7041
NSP	69	P. TRANS FRAME	ANG7048
NSP	70	GROUND PLATE	ANK1257
NSP	71	TUNER CASE	ANK7018
	72	CUSHION RUBBER	AEB7034
	73	INSULATOR PLATE	AMR2672
	74	SCREW	ABA1011
	75	SCREW	ABA1047
NSP	76	PCB SUPPORT	AEC1013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Tuner Case
Shield Case
TUNER Assy
Slide Switch S4
C2 (SD Type Only)
C400
Refer to "3. POWER AMP SECTION".
VSX-99 Only
C2 (CKDYX103M25) (SD Type Only)
SD Type Only S3 Slide Switch (ASH1044)
SD Type Only S4 Slide Switch (ASH1044)
SD Type Only VMZ26P040FZK
C699
Except VSX-99
VSX-99 Only
12✱
SD Type Only
AC Cord Spacer (ANG1153)
ABA-298
VSX-99 Only
SD Type Only S2 Voltage Selector (AKX1004)
SD Type Only S1 Voltage Selector (AKX-507)
C1 (AEC-507) (SD Type Only)
12 SD Type Only
72 Except VSX-99
43 SD Type Only
43 VSX-D3S/ KU/CA Only
FU2 (AEK-126)
ABA-298
Fuse Holder (AKR1005)
Fuse Holder Bracket (ANG-528)
Barrier (AEC1412)
SD Type Onl
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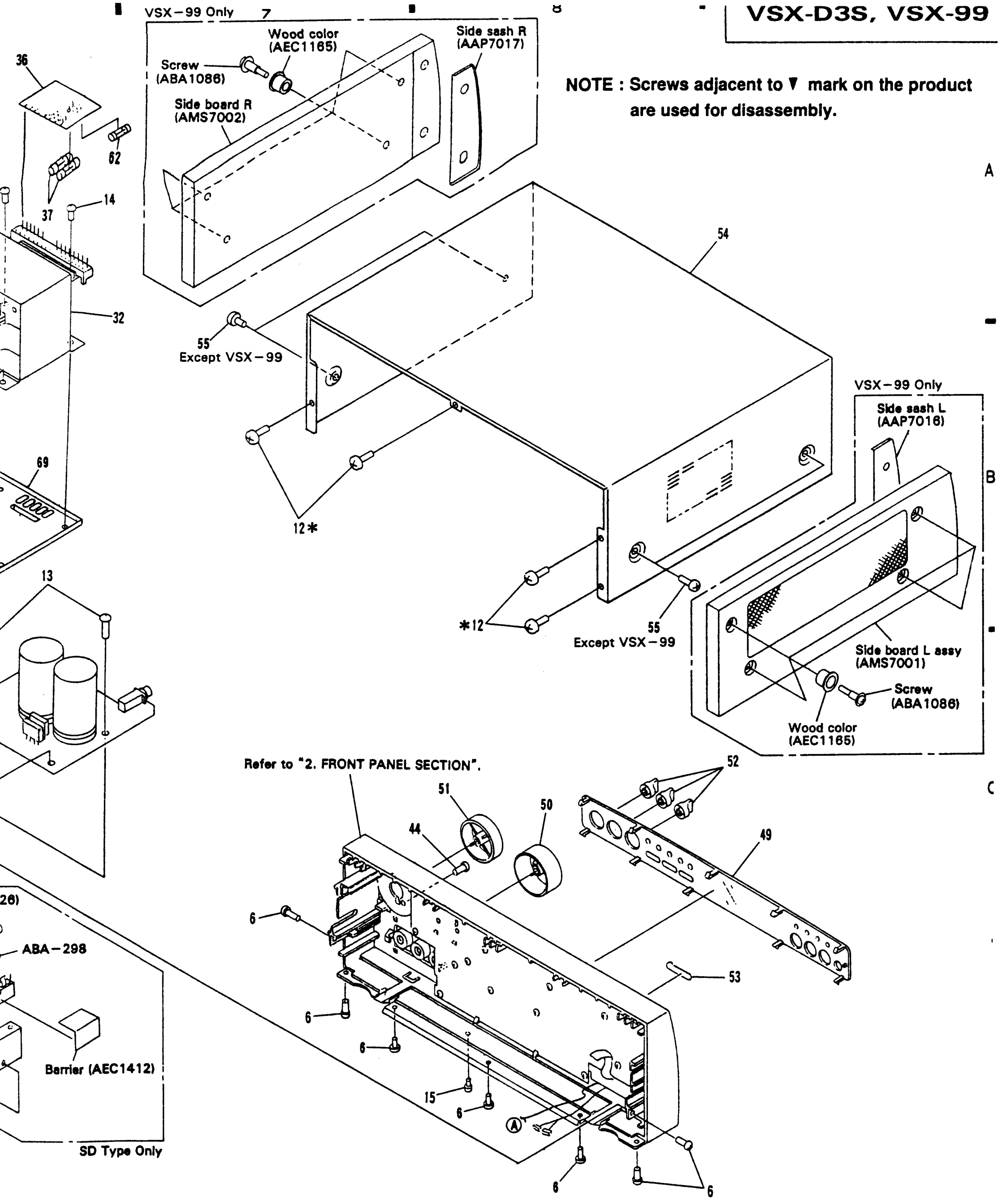
✱ ABA1006 (For VSX-99)

NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.


VSX−99 Only
Screw (ABA1086)
Wood color (AEC1165)
Side sash R (AAP7017)
Side board R (AMS7002)
36
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55 Except VSX−99
12✱
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55 Except VSX−99
VSX−99 Only
Side sash L (AAP7016)
Side board L assy (AMS7001)
Screw (ABA1086)
Wood color (AEC1165)
Refer to "2. FRONT PANEL SECTION".
52
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(26)
ABA−298
Barrier (AEC1412)
SD Type Only
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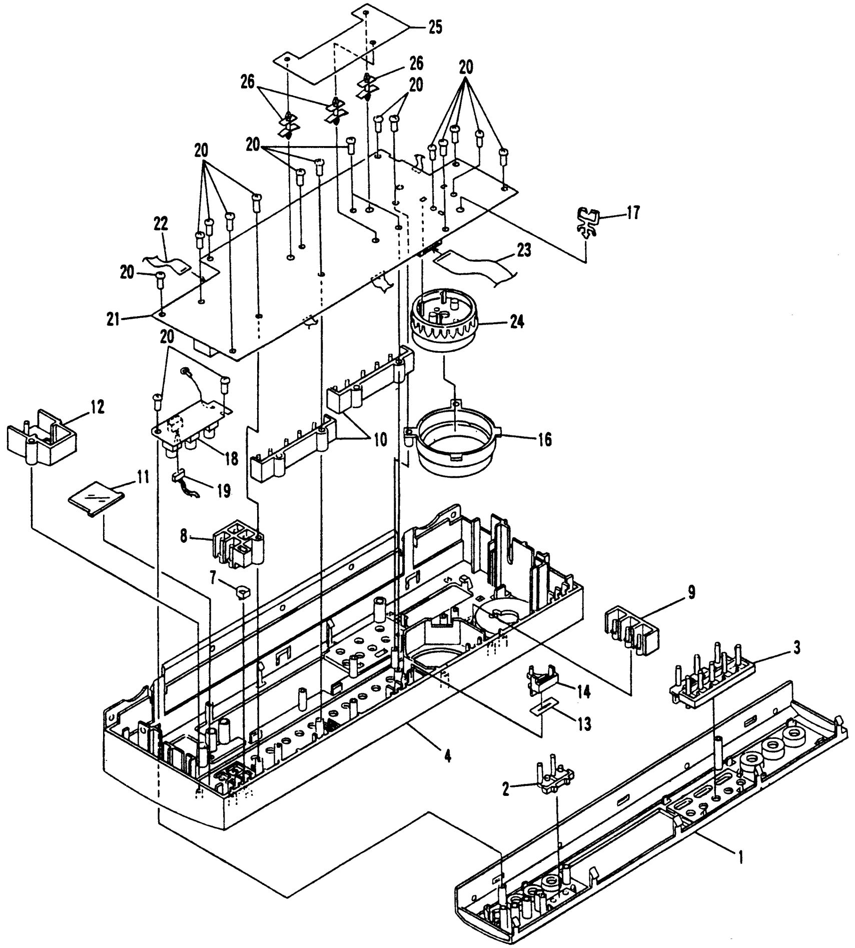
2. FRONT PANEL SECTION

Mark	No.	Description	Parts No.
	1	CENTER PANEL	AAK7152
	2	GUI MODE BUTTON	AAD4048
	3	TX BUTTON	AAD4050
	4	FRONT PANEL	AMB7231
	5	....	
	6	....	
	7	LED LENS	PNW2019
	8	ASC BUTTON	AAD4049
	9	MUTE BUTTON	AAD4047
	10	FUNCTION BUTTON	AAD2470
	11	IR FILTER	AAK2575
	12	POWER BUTTON	AAD4052
NSP	13	SHEET	AED1160
	14	BUTTON B	AAD2472
	15	....	
	16	RING	AAK2586
NSP	17	WIRE CRIP	AEC1535
NSP	18	VIDEO ASSY	AWZ7654
NSP	19	HOUSING 5P (J3)	ADX2096
	20	SCREW	BPZ26P080FMC
	21	FL UCOM ASSY	AWZ7652
	22	FLEXIBLE FLAT CABLE (J1)	ADD1114
	23	FLEXIBLE FLAT CABLE (J2)	ADD1134
	24	ESCUTCHEON	AAK2585
	25	LOGIC ASSY	AWZ7651
NSP	26	PCB SPACER	BEC1049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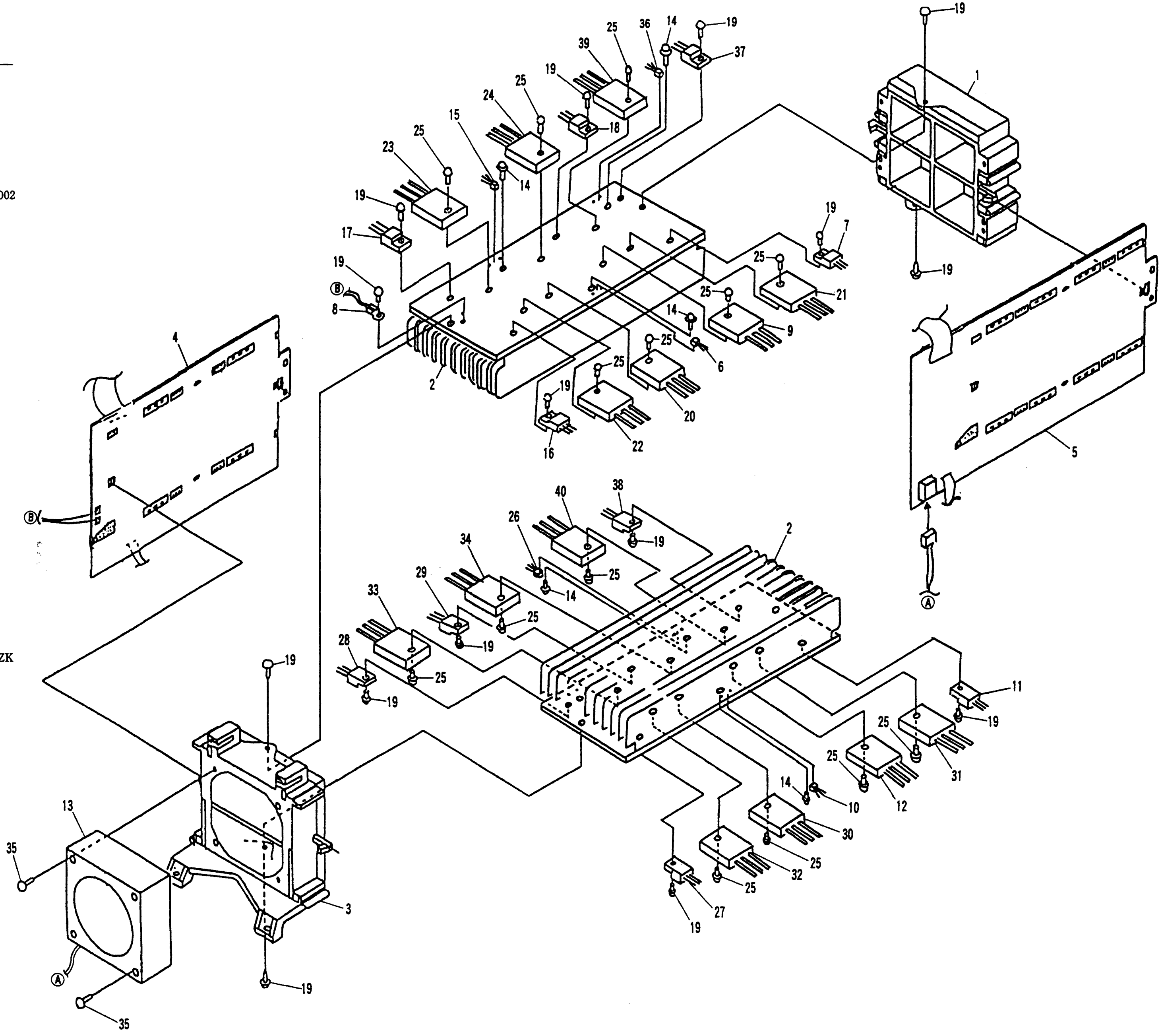
3. POWER AMP SECTION

Mark	No.	Description	Parts No.
	1	MOLD A	AMR7041
NSP	2	RADIATOR	ANH7019
	3	MOLD B	AMR7042
	4	AMP ASSY C, SL, SR 120W	AWZ7582
	5	AMP ASSY FL, FR 2/5CH	AWZ7583
⚠	6	TRANSISTOR (Q209)	2SC1740S
⚠	7	TRANSISTOR (Q23)	2SA1837
⚠	8	THERMISTOR (TH1)	150−203−73002
⚠	9	TRANSISTOR (Q3)	2SA1302
⚠	10	TRANSISTOR (Q210)	2SC1740S
⚠	11	TRANSISTOR (Q21)	2SC4793
⚠	12	TRANSISTOR (Q1)	2SC3281
⚠	13	FAN MOTOR	AXM1022
	14	SCREW	ABA−283
⚠	15	TRANSISTOR (Q309)	2SC1740S
⚠	16	TRANSISTOR (Q24)	2SA1837
⚠	17	TRANSISTOR (Q33)	2SA1837
⚠	18	TRANSISTOR (Q34)	2SA1837
	19	SCREW	ABA−298
⚠	20	TRANSISTOR (Q4)	2SA1302
⚠	21	TRANSISTOR (Q7)	2SA1302
⚠	22	TRANSISTOR (Q8)	2SA1302
⚠	23	TRANSISTOR (Q11)	2SA1302
⚠	24	TRANSISTOR (Q12)	2SA1302
	25	SCREW (For VSX−D3S)	ABA1037
	25	SCREW (For VSX−99)	ABA1082
⚠	26	TRANSISTOR (Q310)	2SC1740S
⚠	27	TRANSISTOR (Q22)	2SC4793
⚠	28	TRANSISTOR (Q31)	2SC4793
⚠	29	TRANSISTOR (Q32)	2SC4793
⚠	30	TRANSISTOR (Q2)	2SC3281
⚠	31	TRANSISTOR (Q5)	2SC3281
⚠	32	TRANSISTOR (Q6)	2SC3281
⚠	33	TRANSISTOR (Q9)	2SC3281
⚠	34	TRANSISTOR (Q10)	2SC3281
	35	SCREW	BPZ30P350FZK
⚠	36	TRANSISTOR (Q105)	2SC1740S
⚠	37	TRANSISTOR (Q36)	2SA1837
⚠	38	TRANSISTOR (Q35)	2SC4793
⚠	39	TRANSISTOR (Q14)	2SA1302
⚠	40	TRANSISTOR (Q13)	2SC3281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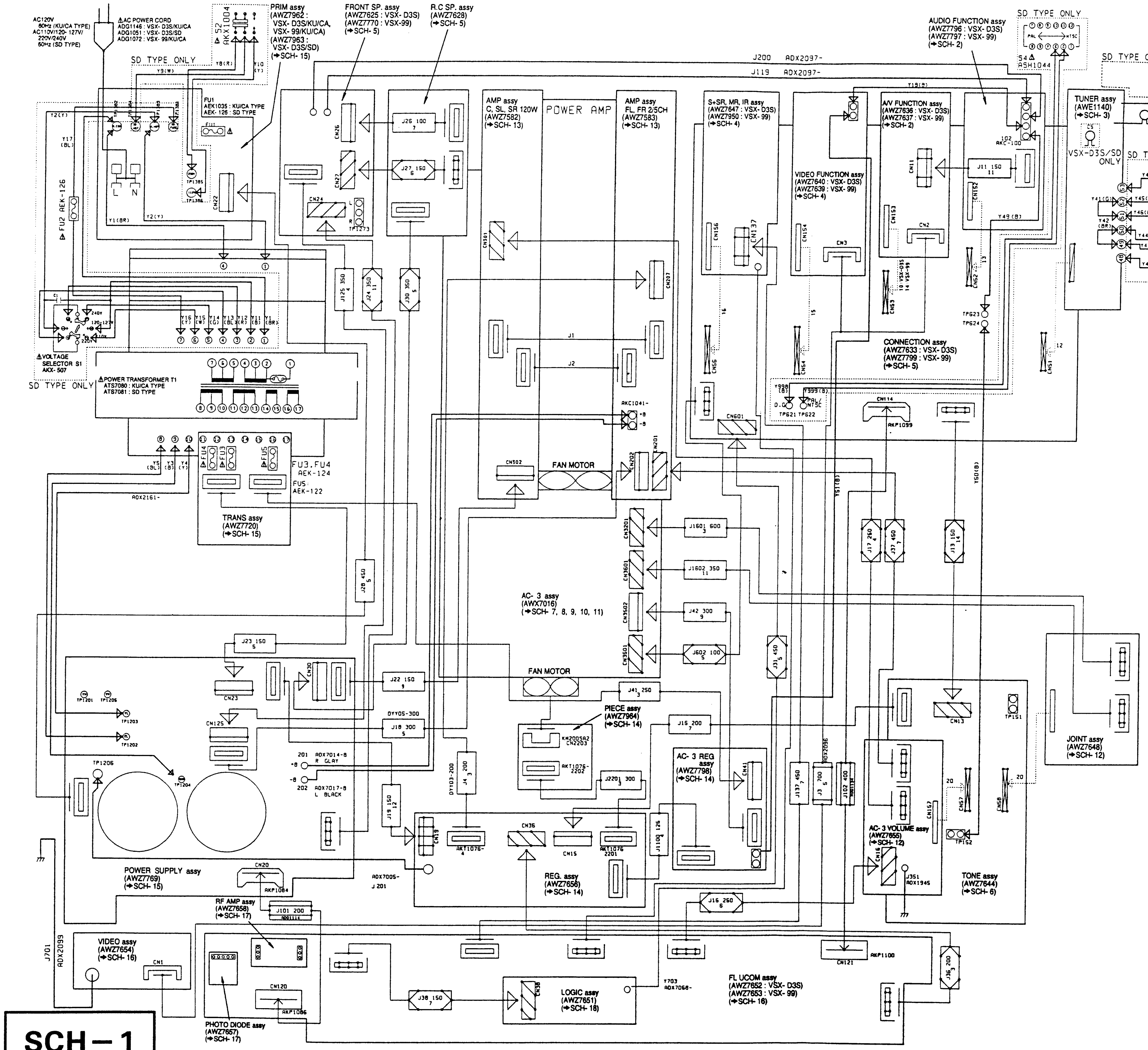
3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

3.1 OVERALL SCHEMATIC DIAGRAM


AC120V 60Hz (KU/CA TYPE)
AC110V/120-127V/220V/240V 50Hz (SD TYPE)
AC POWER CORD
ADG1146 : VSX-D3S/KU/CA
ADG1051 : VSX-D3S/SD
ADG1072 : VSX-99/KU/CA
S2 AKX1004
SD TYPE ONLY
PRIM assy (AWZ7962 : VSX-D3S/KU/CA, VSX-99/KU/CA) (AWZ7963 : VSX-D3S/SD) (→SCH-15)
FRONT SP. assy (AWZ7625 : VSX-D3S) (AWZ7770 : VSX-99) (→SCH-5)
R.C SP. assy (AWZ7628) (→SCH-5)
FU1 AEK1035 : KU/CA TYPE AEK-126 : SD TYPE
FU2 AEK-126
VOLTAGE SELECTOR S1 AKX-507
POWER TRANSFORMER T1 ATS7080 : KU/CA TYPE ATS7081 : SD TYPE
FU3, FU4 AEK-124
FU5 AEK-122
TRANS assy (AWZ7720) (→SCH-15)
ADX2161-
J200 ADX2097-
J119 ADX2097-
AMP assy C, SL, SR 120W (AWZ7582) (→SCH-13)
POWER AMP
AMP assy FL, FR 2/5CH (AWZ7583) (→SCH-13)
S+SR, MR, IR assy (AWZ7647 : VSX-D3S) (AWZ7950 : VSX-99) (→SCH-4)
VIDEO FUNCTION assy (AWZ7640 : VSX-D3S) (AWZ7639 : VSX-99) (→SCH-4)
A/V FUNCTION assy (AWZ7636 : VSX-D3S) (AWZ7637 : VSX-99) (→SCH-2)
AUDIO FUNCTION assy (AWZ7796 : VSX-D3S) (AWZ7797 : VSX-99) (→SCH-2)
S4 ASH1044
TUNER assy (AWE1140) (→SCH-3)
VSX-D3S/SD ONLY
S3 ASH1044
SCH-1
CONNECTION assy (AWZ7633 : VSX-D3S) (AWZ7799 : VSX-99) (→SCH-5)
AKC1041-
AKP1099
FAN MOTOR
AC-3 assy (AWX7016) (→SCH-7, 8, 9, 10, 11)
PIECE assy (AWZ7964) (→SCH-14)
AC-3 REG assy (AWZ7798) (→SCH-14)
REG. assy (AWZ7656) (→SCH-14)
AC-3 VOLUME assy (AWZ7655) (→SCH-12)
TONE assy (AWZ7644) (→SCH-6)
JOINT assy (AWZ7648) (→SCH-12)
POWER SUPPLY assy (AWZ7769) (→SCH-15)
RF AMP assy (AWZ7658) (→SCH-17)
VIDEO assy (AWZ7654) (→SCH-16)
PHOTO DIODE assy (AWZ7657) (→SCH-17)
LOGIC assy (AWZ7651) (→SCH-18)
FL UCOM assy (AWZ7652 : VSX-D3S) (AWZ7653 : VSX-99) (→SCH-16)
J701 ADX2099
ADX7005- J201
201 ADX7014-B R GLAY
202 ADX7017-B L BLACK
AKP1100
AKP1086
AKP1084
Y703 ADX7068-

SCH−1

OVERALL SCHEMATIC DIAGRAM

NOTE FOR SCHEMATIC DIAGRAMS (Type 1A)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or µF unless otherwise noted.
   Ratings: capacitor (µF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or µH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   V : Signal voltage at rated output.
   or ← V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇦ mA or ← mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ⊘ or ⊘ : Adjusting point.
   - : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH−□ ON THE SCHEMATIC DIAGRAM:**
   - SCH−□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):

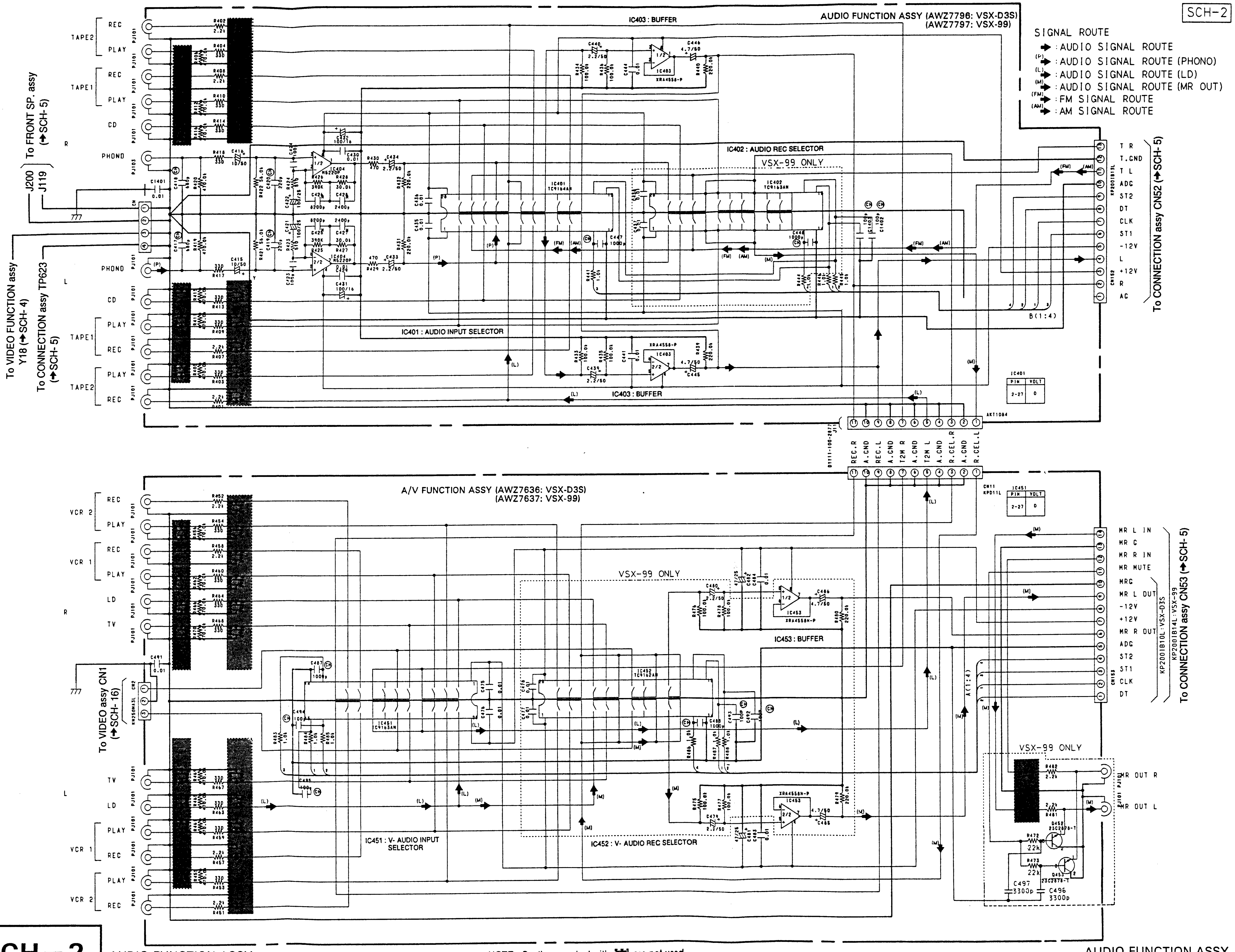
FL UCOM assy

S701	VCR2
S702	POWER STANDBY/ON
S703	INPUT ATT
S704	VIDEO
S705	RETURN
S706	GUI MODE
S707	TV/SAT
S708	SPEAKERS A
S709	GUI ENTER
S710	RESET
S711	LD
S712	SPEAKERS B
S713	SELECT
S714	TAPE1
S716	SUPER BASS (VSX-D3S TYPE) THEATER BASS (VSX-99 TYPE)
S717	TAPE2 MONITOR
S719	MEMORY
S720	PHONO
S722	MPX MODE
S723	TUNER
S724	SLEEP (VSX-D3S TYPE) MULTI-ROOM & SOURCE (VSX-99 TYPE)
S725	FM/AM
S726	CD
S727	DIRECT (VSX-D3S TYPE) PURE LINE (VSX-99 TYPE)
S728	DSP MODE
S729	AC-3
S730	VCR1
S731	DOLBY PRO-LOGIC
S732	DSP OFF
S1281	CENTER SPEAKER SELECTOR I-II

OVERALL SCHEMATIC DIAGRAM

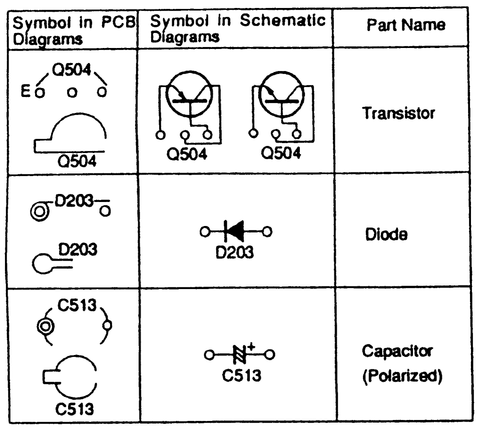
SCH−1

3.2 AUDIO FUNCTION ASSY AND A/V FUNCTION ASSY


SCH-2
SIGNAL ROUTE
➡ : AUDIO SIGNAL ROUTE
(P) ➡ : AUDIO SIGNAL ROUTE (PHONO)
(L) ➡ : AUDIO SIGNAL ROUTE (LD)
(M) ➡ : AUDIO SIGNAL ROUTE (MR OUT)
(FM) ➡ : FM SIGNAL ROUTE
(AM) ➡ : AM SIGNAL ROUTE
AUDIO FUNCTION ASSY (AWZ7796: VSX-D3S)
(AWZ7797: VSX-99)
IC403 : BUFFER
IC402 : AUDIO REC SELECTOR
VSX-99 ONLY
IC401 : AUDIO INPUT SELECTOR
TAPE2 REC
PLAY
TAPE1 REC
PLAY
CD
PHONO
R
L
To FRONT SP. assy (➡SCH-5)
J200
J119
To VIDEO FUNCTION assy Y18 (➡SCH-4)
To CONNECTION assy TP623 (➡SCH-5)
T R
T.GND
T L
ADC
ST2
DT
CLK
ST1
-12V
L
+12V
R
AC
To CONNECTION assy CN52 (➡SCH-5)
B(1:4)
IC401
PIN VOLT
2-27 0
AKT1084
REC.R
A.GND
REC.L
A.GND
T2M R
A.GND
T2M L
A.GND
R.CEL.R
A.GND
R.CEL.L
A/V FUNCTION ASSY (AWZ7636: VSX-D3S)
(AWZ7637: VSX-99)
IC451
PIN VOLT
2-27 0
VCR 2 REC
PLAY
VCR 1 REC
PLAY
LD
TV
To VIDEO assy CN1 (➡SCH-16)
IC453 : BUFFER
IC451 : V- AUDIO INPUT SELECTOR
IC452 : V- AUDIO REC SELECTOR
MR L IN
MR C
MR R IN
MR MUTE
MRC
MR L OUT
-12V
+12V
MR R OUT
ADC
ST2
ST1
CLK
DT
KP200IB10L: VSX-D3S
KP200IB14L: VSX-99
To CONNECTION assy CN53 (➡SCH-5)
A(1:4)
MR OUT R
MR OUT L
Q452 2SC2878-T
Q453 2SC2878-T
R472 22k
R473 22k
C497 3300p
C496 3300p
XRA4558-P
TC9163AN
TC9164AN
1 2 3 4 5 6
A B C D

NOTE : Sections marked with ▨ are not used for VSX- D3S and VSX- 99.

NOTE FOR PCB DIAGRAMS:
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.



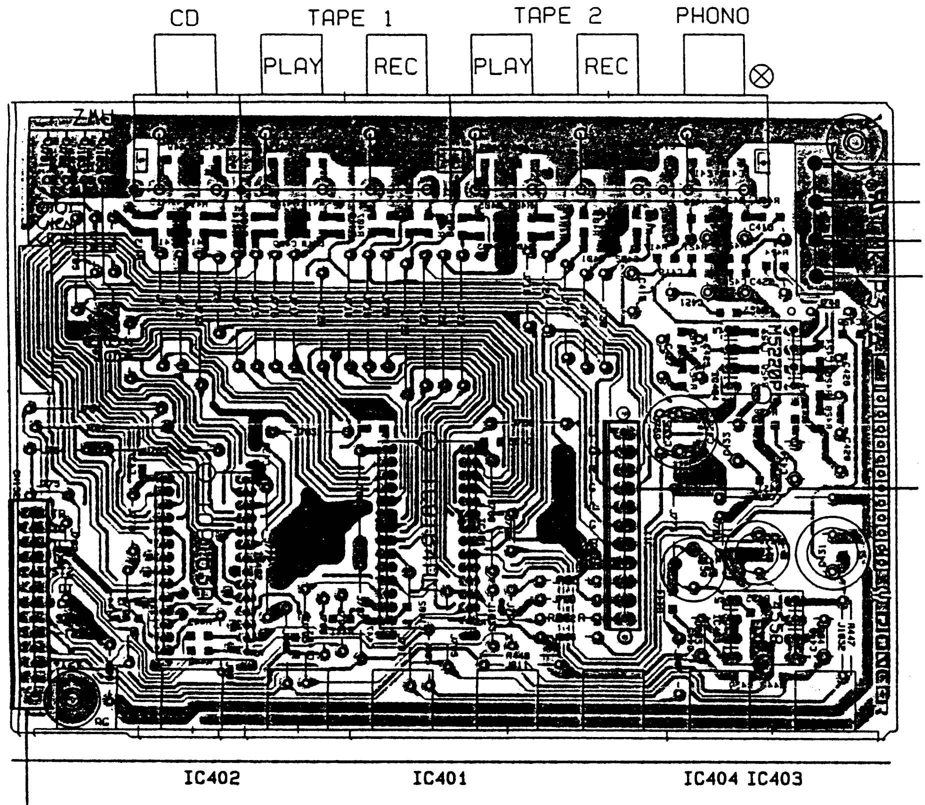
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
E Q504 Q504	Q504 Q504	Transistor
D203 D203	D203	Diode
C513 C513	C513	Capacitor (Polarized)

3. The transistor terminal marked with E or ⊏ shows the emitter.
4. The diode terminal marked with ◎ or ⊂ shows cathode side.
5. The capacitor terminal marked with ◎ or ⊏ shows negative terminal.

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

PCB-1

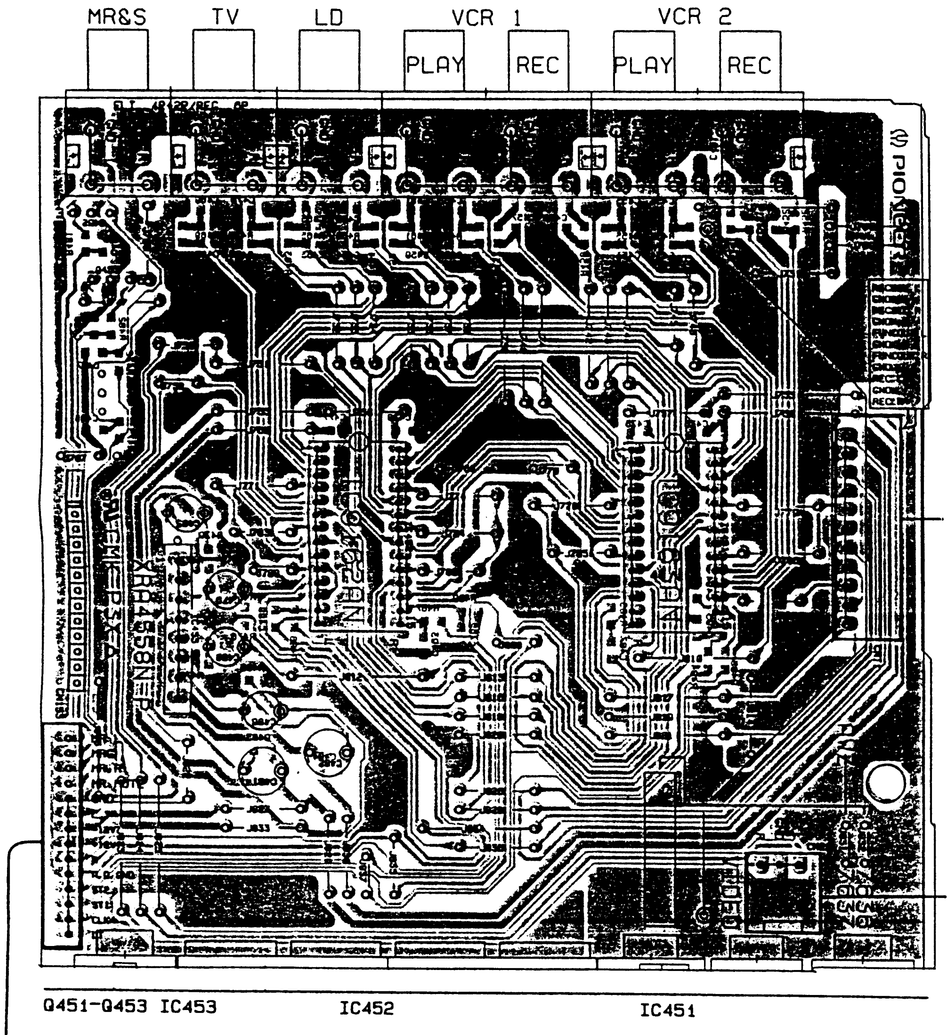
AUDIO FUNCTION ASSY


CD
TAPE 1
PLAY
REC
TAPE 2
PLAY
REC
PHONO
IC402
IC401
IC404 IC403

To FRONT SP. assy J119
To VIDEO FUNCTION assy
To CONNECTION assy TP623
To FRONT SP. assy Y19
To A/V FUNCTION assy CN11
To CONNECTION assy CN52

A/V FUNCTION ASSY

ANP7074-D

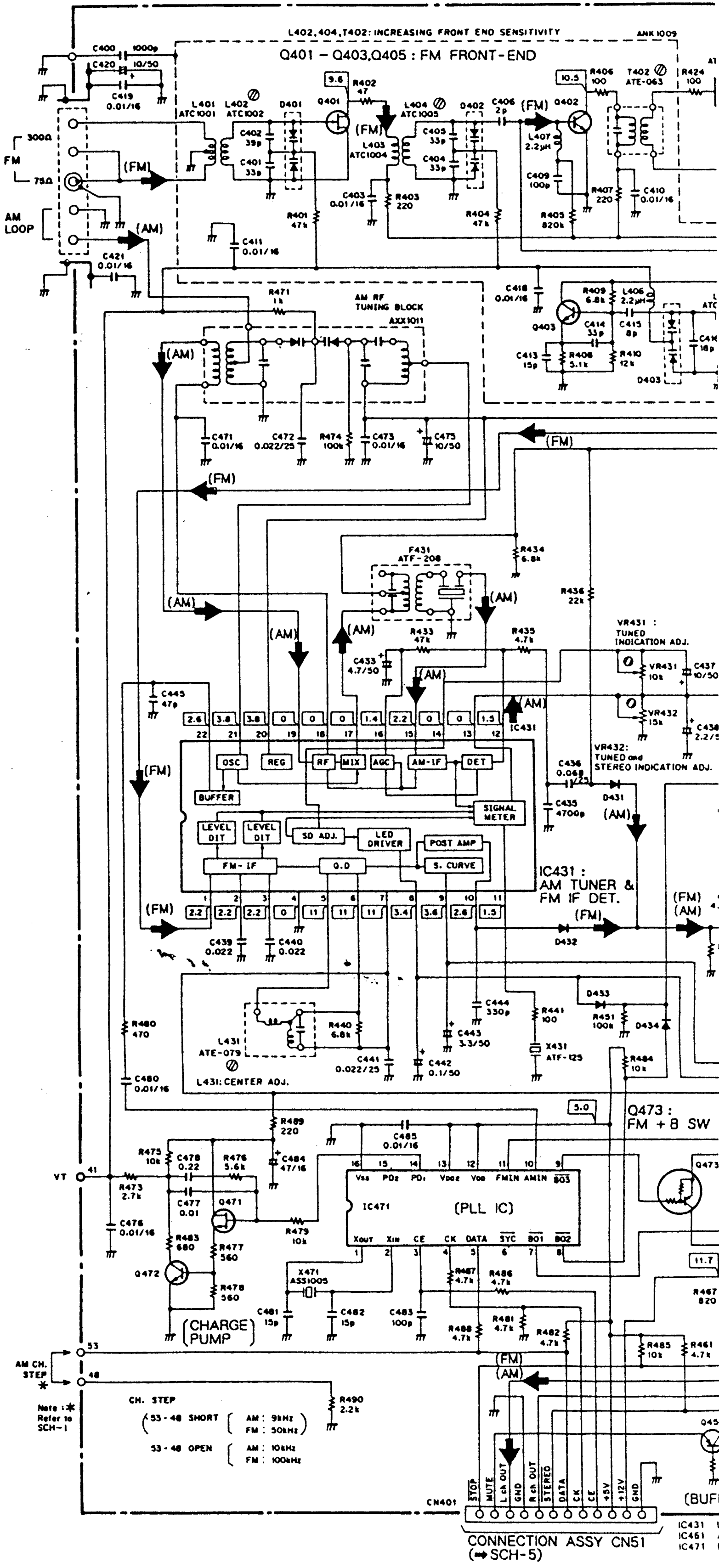

MR&S
TV
LD
VCR 1
PLAY
REC
VCR 2
PLAY
REC
PIONEER
Q451-Q453 IC453
IC452
IC451

To AUDIO FUNCTION assy J11
To VIDEO assy CN1
To CONNECTION assy CN53

- This diagram is viewed from the mounted parts side.

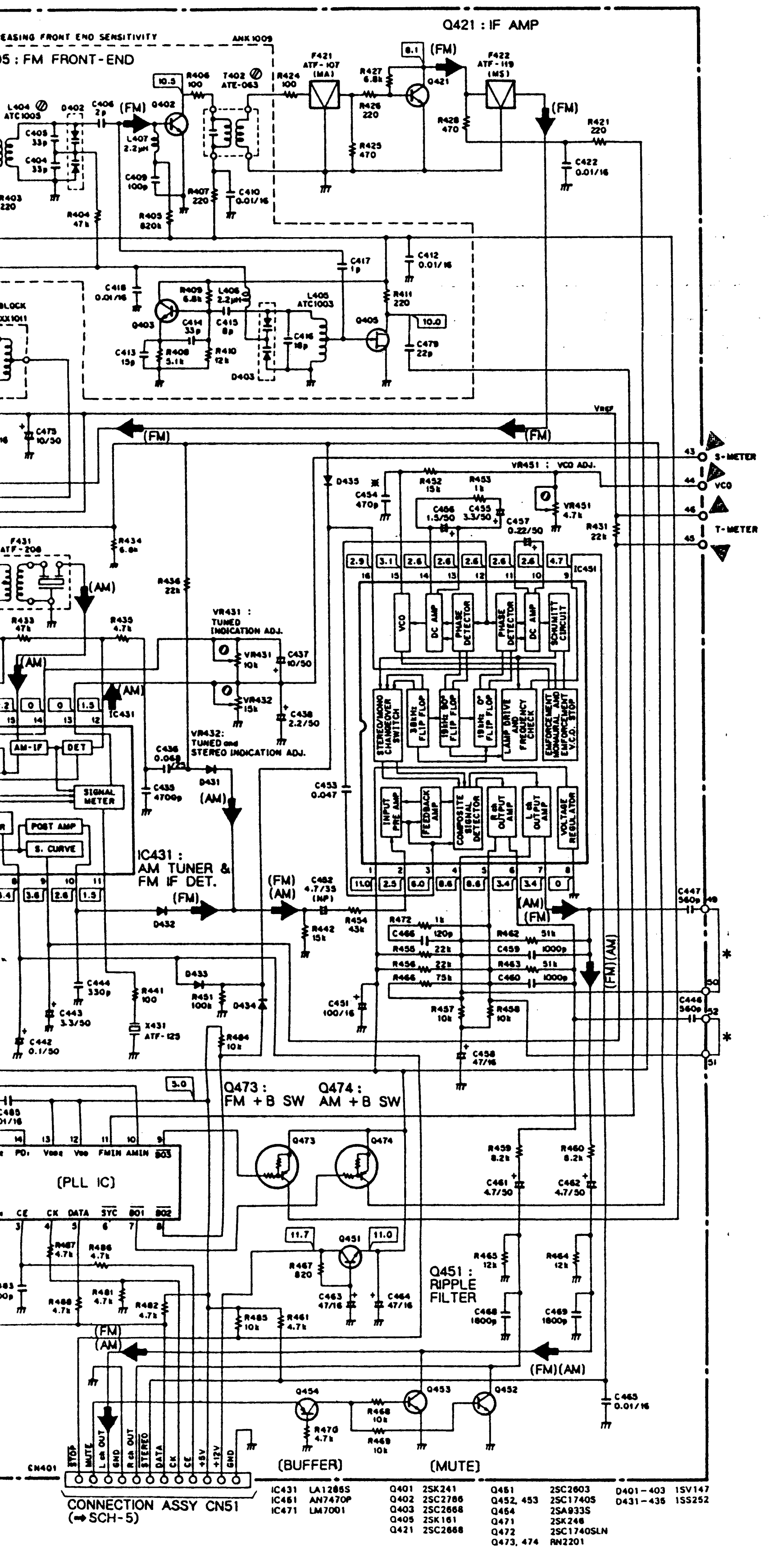
3.3 TUNER ASSY

TUNER ASSY (AWE1140)

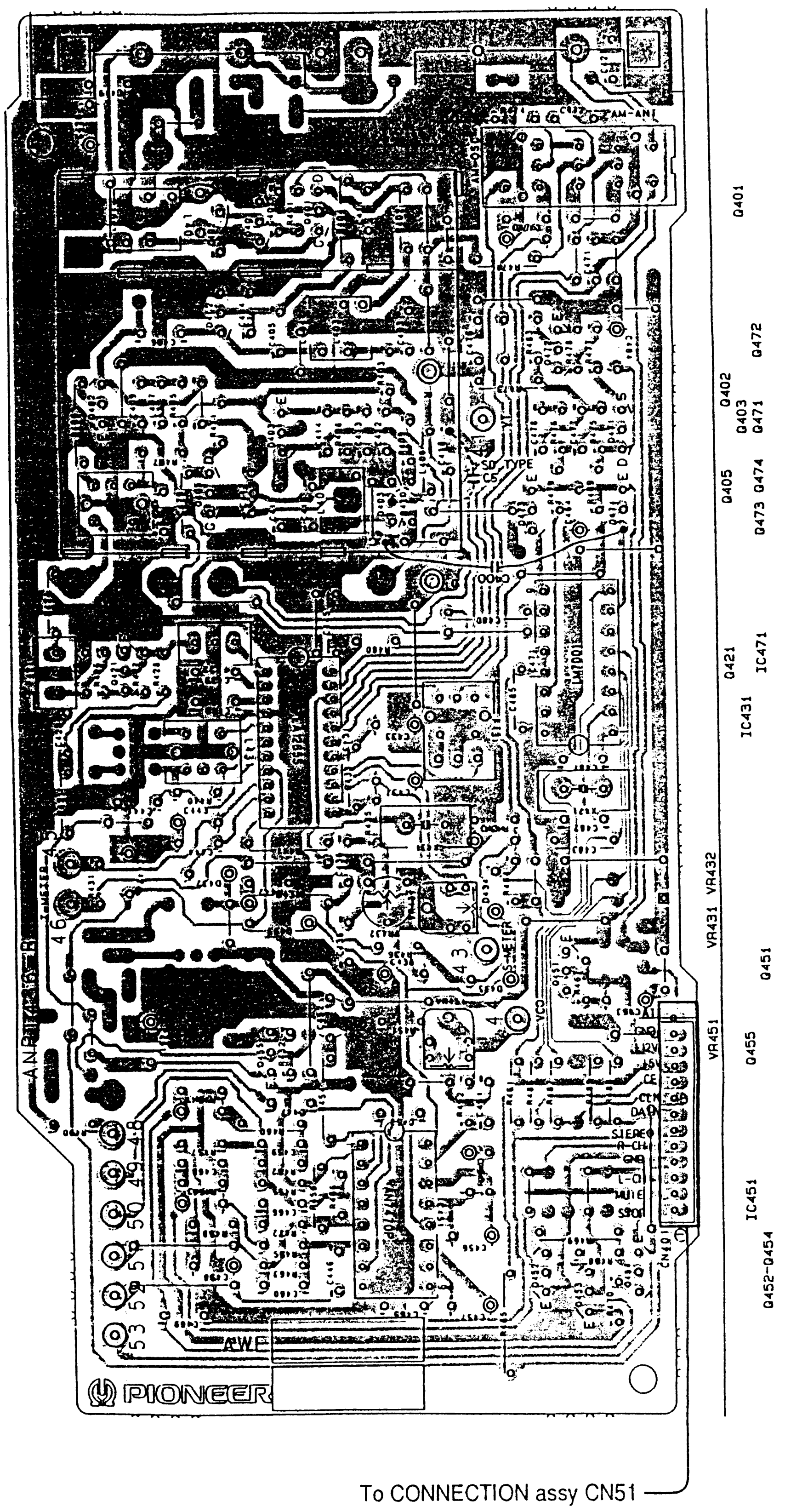

L402,404,T402: INCREASING FRONT END SENSITIVITY
ANK1009
Q401 – Q403,Q405 : FM FRONT-END
FM 300Ω 75Ω
AM LOOP
C400 1000p
C420 10/50
C419 0.01/16
C421 0.01/16
L401 ATC1001
L402 ATC1002
D401
Q401
9.6
R402 47
L403 ATC1004
L404 ATC1005
D402
C406 2p
Q402
10.5
R406 100
T402 ATE-063
R424 100
C402 39p
C401 33p
C405 33p
C404 33p
C403 0.01/16
R403 220
R401 47k
R404 47k
L407 2.2μH
C409 100p
R405 820k
R407 220
C410 0.01/16
C411 0.01/16
C418 0.01/16
Q403
R409 6.8k
L406 2.2μH
C414 33p
C415 8p
C413 15p
R408 5.1k
R410 12k
D403
R471 1k
AM RF TUNING BLOCK
AXX1011
C471 0.01/16
C472 0.022/25
R474 100k
C473 0.01/16
C475 10/50
(FM)
(AM)
F431 ATF-208
R434 6.8k
R436 22k
R433 47k
R435 4.7k
C433 4.7/50
C445 47p
VR431 : TUNED INDICATION ADJ.
VR431 10k
C437 10/50
VR432 15k
VR432: TUNED and STEREO INDICATION ADJ.
IC431
OSC
REG
RF
MIX
AGC
AM-IF
DET
BUFFER
SIGNAL METER
LEVEL DIT
LEVEL DIT
SD ADJ.
LED DRIVER
POST AMP
FM-IF
Q.D
S. CURVE
C436 0.068
C435 4700p
D431
IC431 : AM TUNER & FM IF DET.
D432
C439 0.022
C440 0.022
L431 ATE-079
L431: CENTER ADJ.
R440 6.8k
C441 0.022/25
C442 0.1/50
C443 3.3/50
C444 330p
R441 100
X431 ATF-125
D433
R451 100k
D434
R484 10k
R480 470
C480 0.01/16
5.0
Q473 : FM + B SW
R489 220
C485 0.01/16
C484 47/16
VT
R475 10k
R473 2.7k
C478 0.22
C477 0.01
R476 5.6k
Q471
R479 10k
C476 0.01/16
R483 680
Q472
R477 560
R478 560
(CHARGE PUMP)
IC471
(PLL IC)
X471 ASS1005
C481 15p
C482 15p
C483 100p
R487 4.7k
R486 4.7k
R488 4.7k
R481 4.7k
R482 4.7k
11.7
R467 820
R485 10k
R461 4.7k
AM CH. STEP
Note : * Refer to SCH-1
CH. STEP
53-48 SHORT AM : 9kHz FM : 50kHz
53-48 OPEN AM : 10kHz FM : 100kHz
R490 2.2k
CN401
STOP
MUTE
L ch OUT
GND
R ch OUT
STEREO
DATA
CK
CE
+5V
+12V
GND
CONNECTION ASSY CN51 (➡SCH-5)

PCB-2

SIGNAL ROUTE
(FM) ➔ : FM SIGNAL ROUTE
(AM) ➔ : AM SIGNAL ROUTE


Q421 : IF AMP
FM FRONT-END
(PLL IC)
IC431 : AM TUNER & FM IF DET.
Q473 : FM +B SW
Q474 : AM +B SW
Q451 : RIPPLE FILTER
(BUFFER)
(MUTE)
S-METER
VCO
T-METER
VR451 : VCO ADJ.
VR431 : TUNED INDICATION ADJ.
VR432 : TUNED and STEREO INDICATION ADJ.
CONNECTION ASSY CN51 (→SCH-5)
CN401

TUNER ASSY

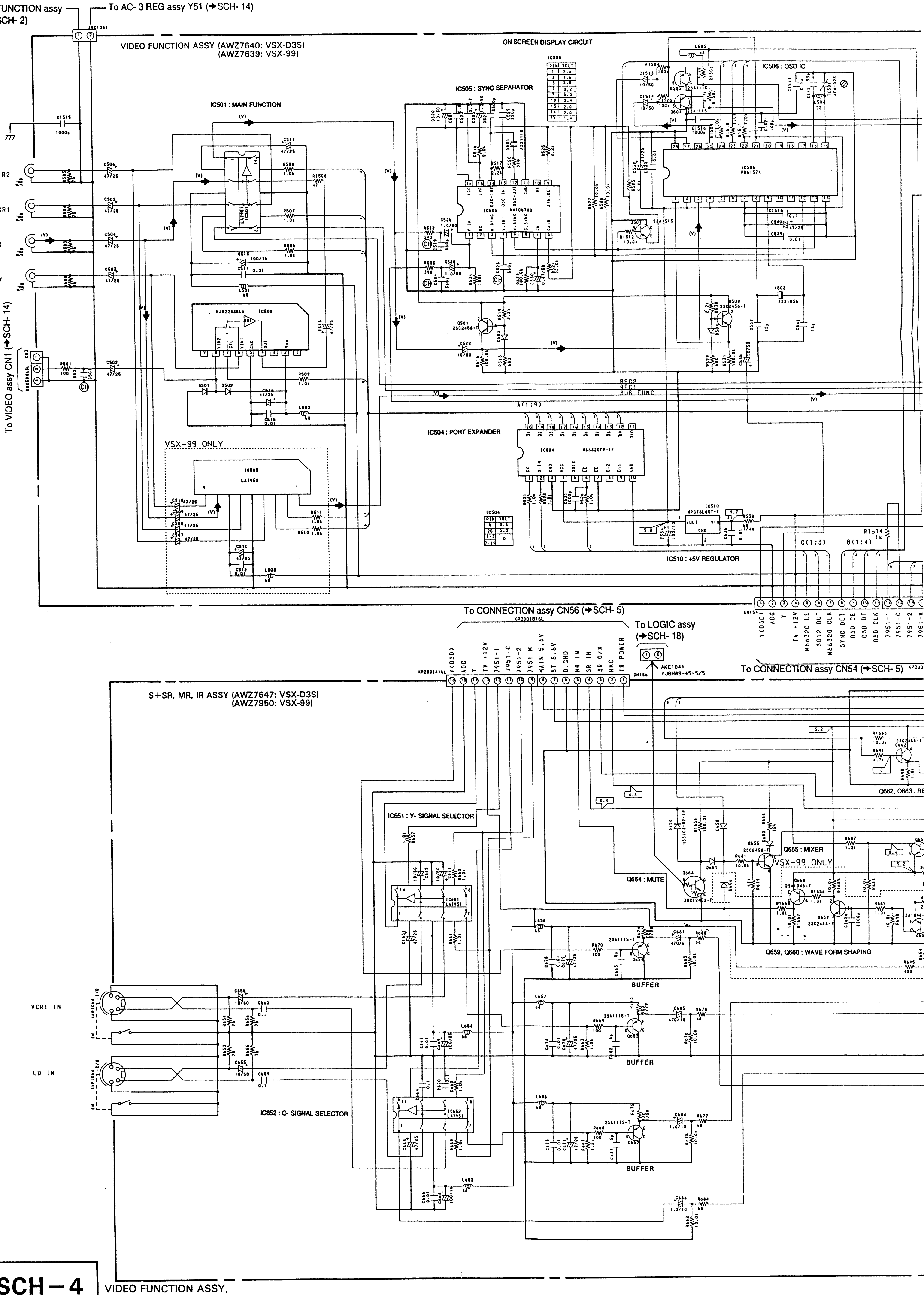

PIONEER
Q401
Q402 Q403 Q471 Q472
Q405 Q473 Q474
Q421 IC431 IC471
VR431 VR432
Q451
VR451 Q455
IC451
Q452-Q454

To CONNECTION assy CN51

TUNER ASSY **SCH−3**

- This diagram is viewed from the mounted parts side.

3.4 VIDEO FUNCTION ASSY AND S+SR, MR, IR ASSY

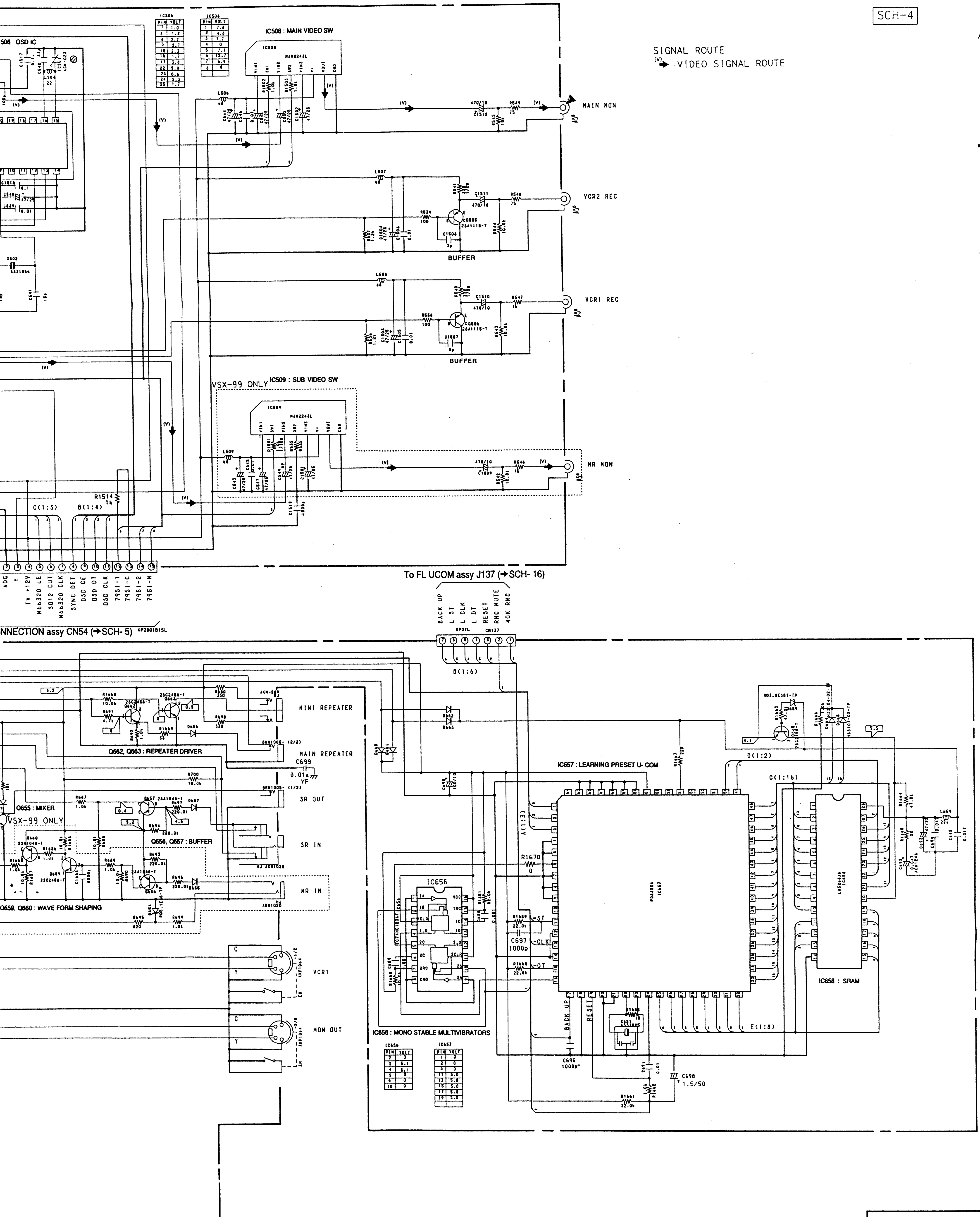

1
2
3
4
5
A
B
C
D
E
F
To AUDIO FUNCTION assy Y18 (➔SCH- 2)
To AC- 3 REG assy Y51 (➔SCH- 14)
AKC1041
VIDEO FUNCTION ASSY (AWZ7640: VSX-D3S)
(AWZ7639: VSX-99)
ON SCREEN DISPLAY CIRCUIT
IC505
PIN VOLT
IC505 : SYNC SEPARATOR
IC506 : OSD IC
IC501 : MAIN FUNCTION
IC506 PD6157A
IC505 NH1047XD
C1515 1000p
VCR2
VCR1
LD
TV
To VIDEO assy CN1 (➔SCH- 14)
NJM2233BLA IC502
REC2
REC1
SUB FUNC
A(1:9)
IC504 : PORT EXPANDER
IC504 M66320FP-1F
VSX-99 ONLY
IC503 LA7952
IC510 : +5V REGULATOR
UPC78L05T-1
C(1:3)
B(1:4)
R1514 1k
Q501 2SC2456-T
Q502 2SC2456-T
Q507 2SA1515
X502 A331056
To CONNECTION assy CN56 (➔SCH- 5)
KP200IB16L
To LOGIC assy (➔SCH- 18)
AKC1041 YJ8HW8-45-5/5
To CONNECTION assy CN54 (➔SCH- 5)
CN154
Y(OSD)
ADG
Y
TV +12V
7951-1
7951-C
7951-2
7951-M
MAIN 5.6V
ST 5.6V
D.GND
MR IN
SR IN
SR O/X
RMC
IR POWER
M66320 LE
SDI2 OUT
M66320 CLK
SYNC DET
OSD CE
OSD DT
OSD CLK
S+SR, MR, IR ASSY (AWZ7647: VSX-D3S)
(AWZ7950: VSX-99)
IC651 : Y- SIGNAL SELECTOR
IC651 LA7951
IC652 : C- SIGNAL SELECTOR
IC652 LA7951
Q664 : MUTE
Q655 : MIXER
VSX-99 ONLY
Q662, Q663 : RE
Q659, Q660 : WAVE FORM SHAPING
BUFFER
BUFFER
BUFFER
VCR1 IN
LD IN
5.2
4.8
0.4

SCH-4

VIDEO FUNCTION ASSY,
S+SR, MR, IR ASSY

SCH-4

SIGNAL ROUTE
(V) ➔ : VIDEO SIGNAL ROUTE


IC506 : OSD IC
IC508 : MAIN VIDEO SW
NJM2243L
MAIN MON
VCR2 REC
VCR1 REC
BUFFER
Q505 2SA1115-T
Q506 2SA1115-T
VSX-99 ONLY
IC509 : SUB VIDEO SW
MR MON
R1514 1k
C(1:3)
B(1:4)
TV +12V
M66320 LE
5012 OUT
M66320 CLK
SYNC DET
OSD CE
OSD DT
OSD CLK
7951-1
7951-C
7951-2
7951-M
NNECTION assy CN54 (➔SCH- 5)
KP200181S1L
To FL UCOM assy J137 (➔SCH- 16)
BACK UP
L ST
L CLK
L DT
RESET
RMC MUTE
40K RMC
KP07L
CN137
B(1:6)
MINI REPEATER
MAIN REPEATER
C699 0.01μ YF
Q662, Q663 : REPEATER DRIVER
SR OUT
SR IN
MR IN
Q655 : MIXER
VSX-99 ONLY
Q656, Q657 : BUFFER
Q659, Q660 : WAVE FORM SHAPING
VCR1
MON OUT
IC656
IC656 : MONO STABLE MULTIVIBRATORS
IC657 : LEARNING PRESET U- COM
R1670 0
C697 1000p
C696 1000p
C698 1.5/50
A(1:3)
D(1:2)
C(1:16)
E(1:8)
BACK UP
RESET
IC658 : SRAM
RD5.0ES81-TP
L659

IC506

PIN	VOLT
1	1.0
3	1.2
8	2.7
9	2.7
15	2.3
16	1.7
17	3.8
22	5.0
23	0.6
24	5.3
25	1.7

IC508

PIN	VOLT
1	7.8
2	4.8
3	7.7
4	0
5	7.7
6	12.7
7	6.9
8	0

IC656

PIN	VOLT
2	0
3	5.1
4	5.1
5	0
9	0
10	0

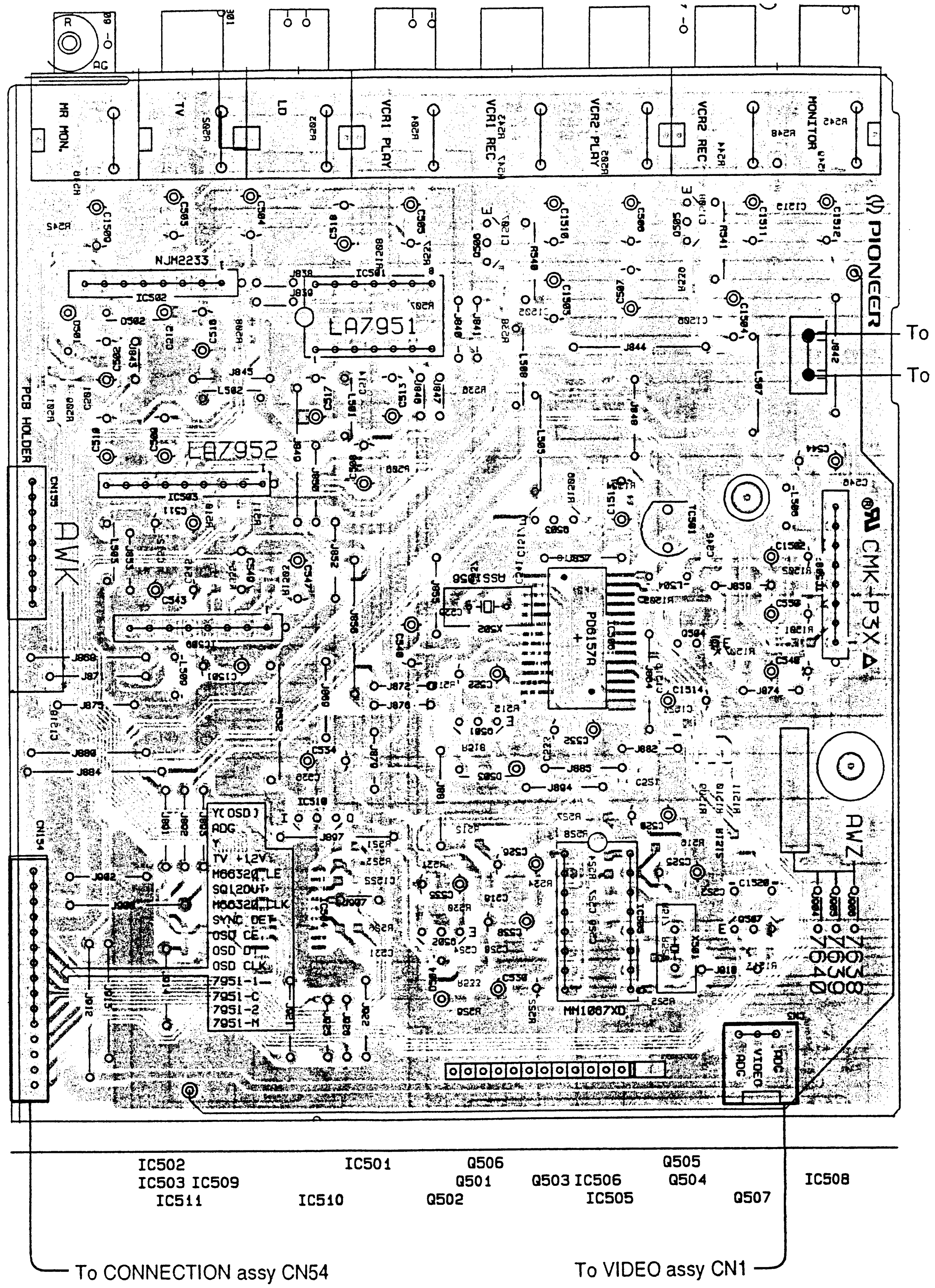
IC657

PIN	VOLT
1	0
2	0
3	0
11	5.0
13	5.0
15	5.0
17	5.0
19	5.0

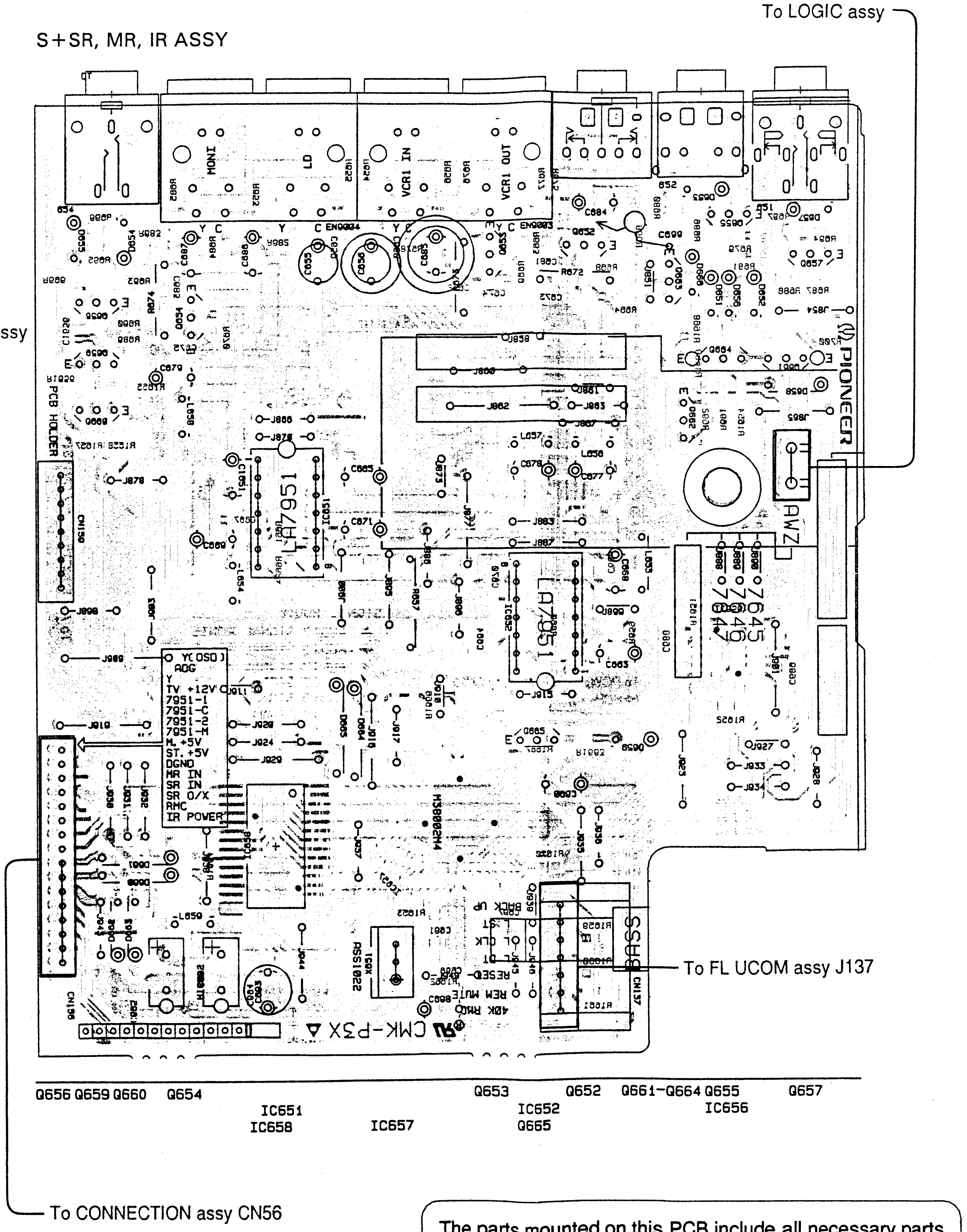
VIDEO FUNCTION ASSY,
S+SR, MR, IR ASSY

SCH−4

VIDEO FUNCTION ASSY


To AUDIO FUNCTION assy
To AC- 3 REG assy
IC502
IC503 IC509
IC511
IC501
IC510
Q506
Q501
Q502
Q503 IC506
IC505
Q505
Q504
Q507
IC508
To CONNECTION assy CN54
To VIDEO assy CN1

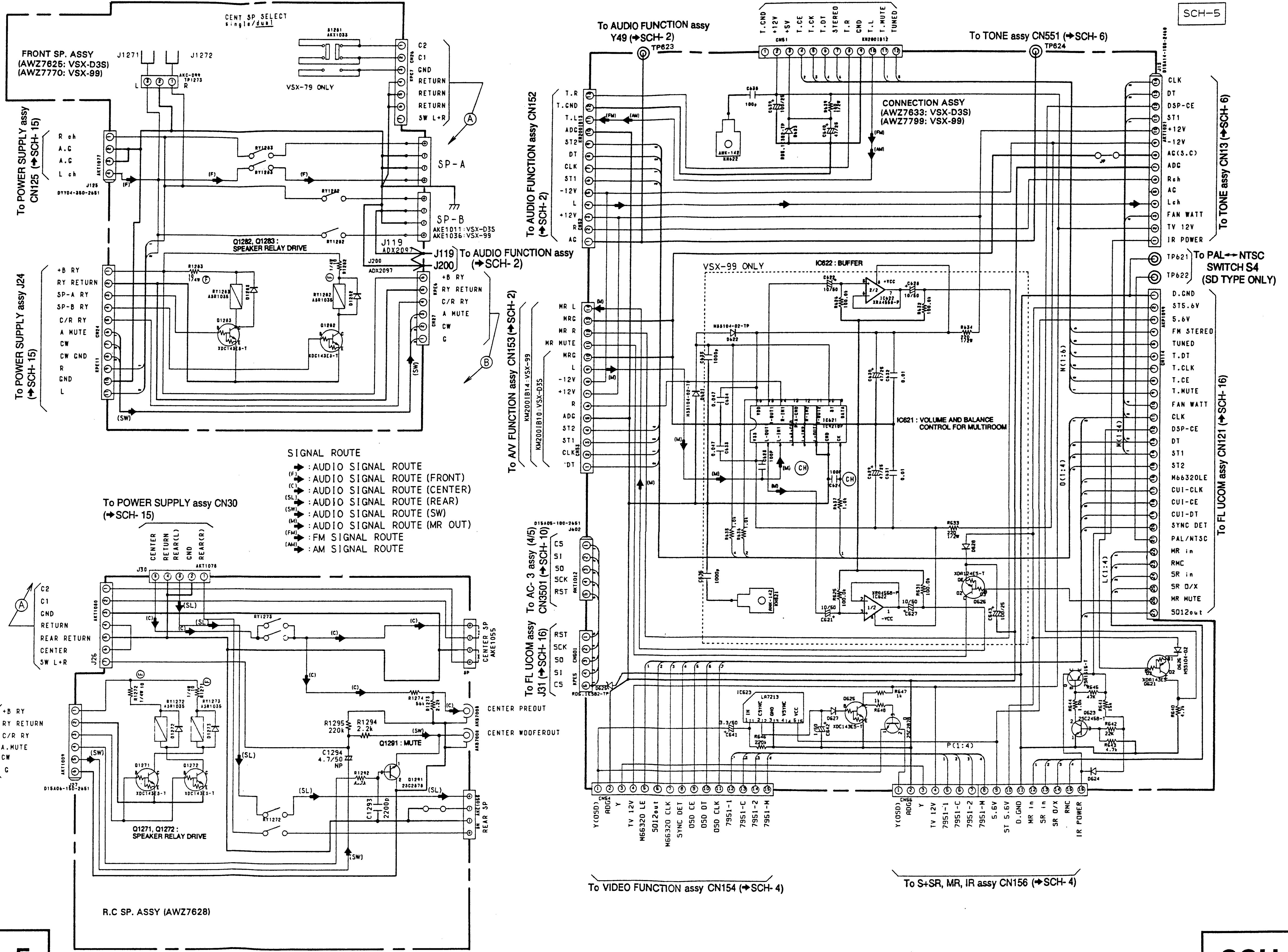
S+SR, MR, IR ASSY


To LOGIC assy
Q656 Q659 Q660 Q654
IC651
IC658
IC657
Q653
IC652
Q665
Q652
Q661–Q664 Q655
IC656
Q657
To FL UCOM assy J137
To CONNECTION assy CN56

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

- This diagram is viewed from the mounted parts side.

3.5 FRONT SP. ASSY, R.C SP. ASSY AND CONNECTION ASSY


SCH–5
FRONT SP. ASSY
(AWZ7625: VSX-D3S)
(AWZ7770: VSX-99)
CENT SP SELECT single/dual
S1281 AKX1033
J1271 J1272
VSX-79 ONLY
C2
C1
GND
RETURN
RETURN
RETURN
SW L+R
A
To POWER SUPPLY assy CN125 (➔SCH- 15)
R ch
A.C
A.C
L ch
J125
D7Y04-350-2651
RY1283
RY1282
SP-A
SP-B
AKE1011: VSX-D3S
AKE1036: VSX-99
Q1282, Q1283 : SPEAKER RELAY DRIVE
J119 ADX2097
J200 ADX2097
J119
J200
To AUDIO FUNCTION assy (➔SCH- 2)
To POWER SUPPLY assy J24 (➔SCH- 15)
+B RY
RY RETURN
SP-A RY
SP-B RY
C/R RY
A MUTE
CW
CW GND
R
GND
L
+B RY
RY RETURN
C/R RY
A MUTE
CW
G
B
(SW)
(F)
SIGNAL ROUTE
➔ : AUDIO SIGNAL ROUTE
(F) ➔ : AUDIO SIGNAL ROUTE (FRONT)
(C) ➔ : AUDIO SIGNAL ROUTE (CENTER)
(SL) ➔ : AUDIO SIGNAL ROUTE (REAR)
(SW) ➔ : AUDIO SIGNAL ROUTE (SW)
(M) ➔ : AUDIO SIGNAL ROUTE (MR OUT)
(FM) ➔ : FM SIGNAL ROUTE
(AM) ➔ : AM SIGNAL ROUTE
To POWER SUPPLY assy CN30 (➔SCH- 15)
CENTER
RETURN
REAR(L)
GND
REAR(R)
J30 AKT1078
C2
C1
GND
RETURN
REAR RETURN
CENTER
SW L+R
J26
RY1273
CENTER SP AKE1055
CENTER PREOUT
CENTER WOOFEROUT
R1295 220k
R1294 2.2k
Q1291 : MUTE
C1294 4.7/50 NP
RY1272 ASR1035
RY1273 ASR1035
Q1271, Q1272 : SPEAKER RELAY DRIVE
REAR SP
+B RY
RY RETURN
C/R RY
A.MUTE
CW
G
D15A06-150-2651
R.C SP. ASSY (AWZ7628)
To TUNER assy CN401 (➔SCH- 3)
T.GND
+12V
+5V
T.CE
T.CK
T.DT
STEREO
T.R
GND
T.L
T.MUTE
TUNED
CN51 KM200B12
To AUDIO FUNCTION assy Y49 (➔SCH- 2)
TP623
To TONE assy CN551 (➔SCH- 6)
TP624
CONNECTION ASSY
(AWZ7633: VSX-D3S)
(AWZ7799: VSX-99)
AMK-142 KH622
To AUDIO FUNCTION assy CN152 (➔SCH- 2)
T.R
T.GND
T.L
ADC
ST2
DT
CLK
ST1
-12V
L
+12V
R
AC
CLK
DT
DSP-CE
ST1
+12V
-12V
AC(S.C)
ADC
Rch
AC
Lch
FAN WATT
TV 12V
IR POWER
To TONE assy CN13 (➔SCH- 6)
TP621
TP622
To PAL↔NTSC SWITCH S4 (SD TYPE ONLY)
VSX-99 ONLY
IC622 : BUFFER
IC621 : VOLUME AND BALANCE CONTROL FOR MULTIROOM
To A/V FUNCTION assy CN153 (➔SCH- 2)
KM200B14: VSX-99
KM200B10: VSX-D3S
MR L
MRG
MR R
MR MUTE
MRG
L
-12V
+12V
R
ADC
ST2
ST1
CLK
DT
D.GND
ST5.6V
5.6V
FM STEREO
TUNED
T.DT
T.CLK
T.CE
T.MUTE
FAN WATT
CLK
DSP-CE
DT
ST1
ST2
M66320LE
CUI-CLK
CUI-CE
CUI-DT
SYNC DET
PAL/NTSC
MR in
RMC
SR in
SR O/X
MR MUTE
5012out
To FL UCOM assy CN121 (➔SCH- 16)
To AC- 3 assy (4/5) CN3501 (➔SCH- 10)
CS
SI
SO
SCK
RST
To FL UCOM assy J31 (➔SCH- 16)
RST
SCK
SO
SI
CS
IC623 LA7213
P(1:4)
Y(OSD)
ADG
Y
TV 12V
M66320 LE
5012out
M66320 CLK
SYNC DET
OSD CE
OSD DT
OSD CLK
7951-1
7951-C
7951-2
7951-M
Y(OSD)
ADG
Y
TV 12V
7951-C
7951-2
7951-M
5.6V
ST 5.6V
D.GND
MR in
SR in
SR O/X
RMC
IR POWER
To VIDEO FUNCTION assy CN154 (➔SCH- 4)
To S+SR, MR, IR assy CN156 (➔SCH- 4)

To TONE assy CN13

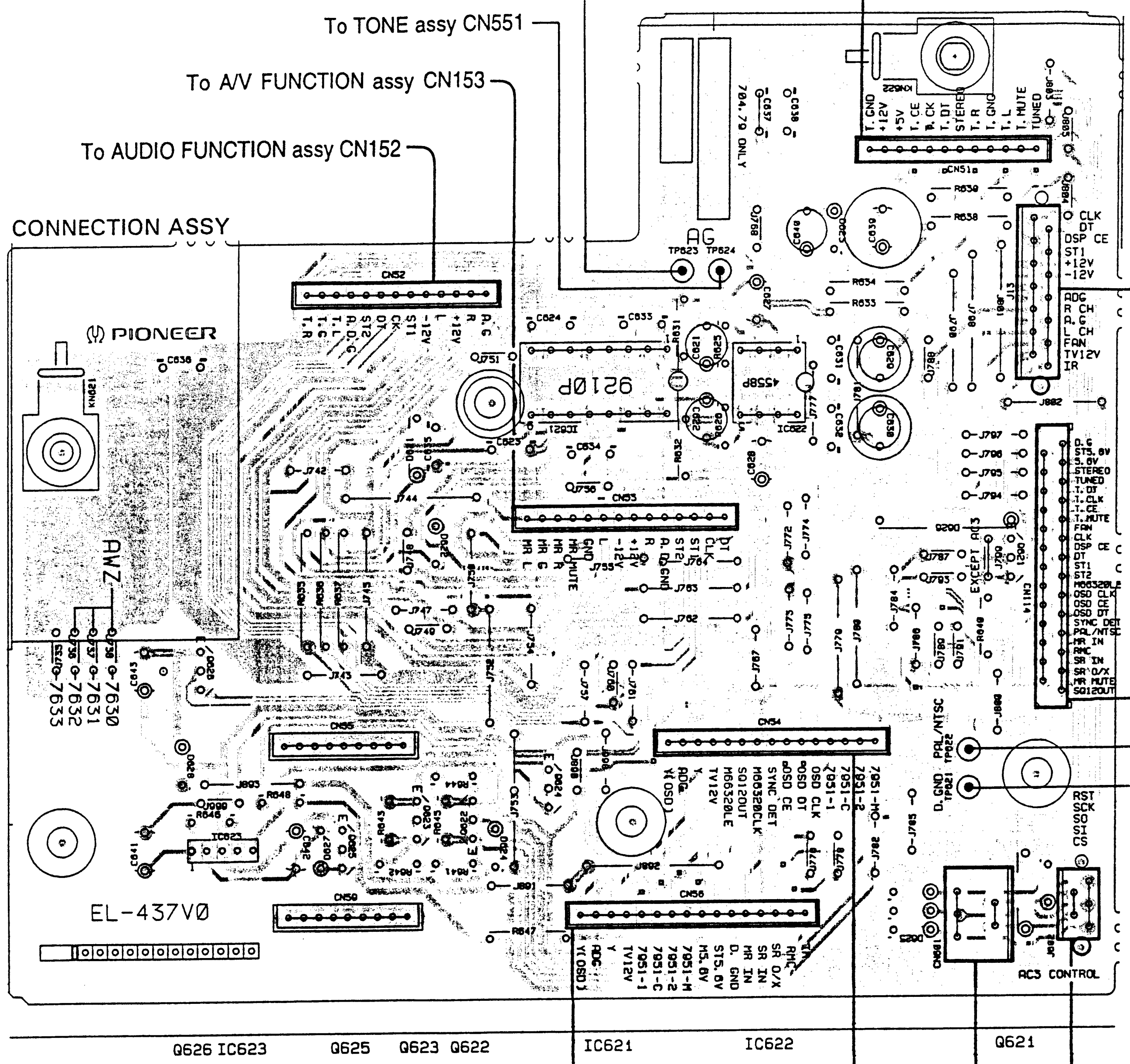
To TUNER assy CN401

To AUDIO FUNCTION assy

To TONE assy CN551

To A/V FUNCTION assy CN153

To AUDIO FUNCTION assy CN152


CONNECTION ASSY
PIONEER
AWZ
EL-437V0
CN52
CN53
CN54
CN55
CN56
CN59
IC622
4558P
9210P
AG
TP623
TP624
PAL/NTSC
D. GND
AC3 CONTROL
EXCEPT AC3
Q626 IC623
Q625
Q623 Q622
IC621
IC622
Q621

To S+SR, MR, IR assy CN156

To VIDEO FUNCTION assy CN154

To FL UCOM assy J31

To AC- 3 assy CN3501

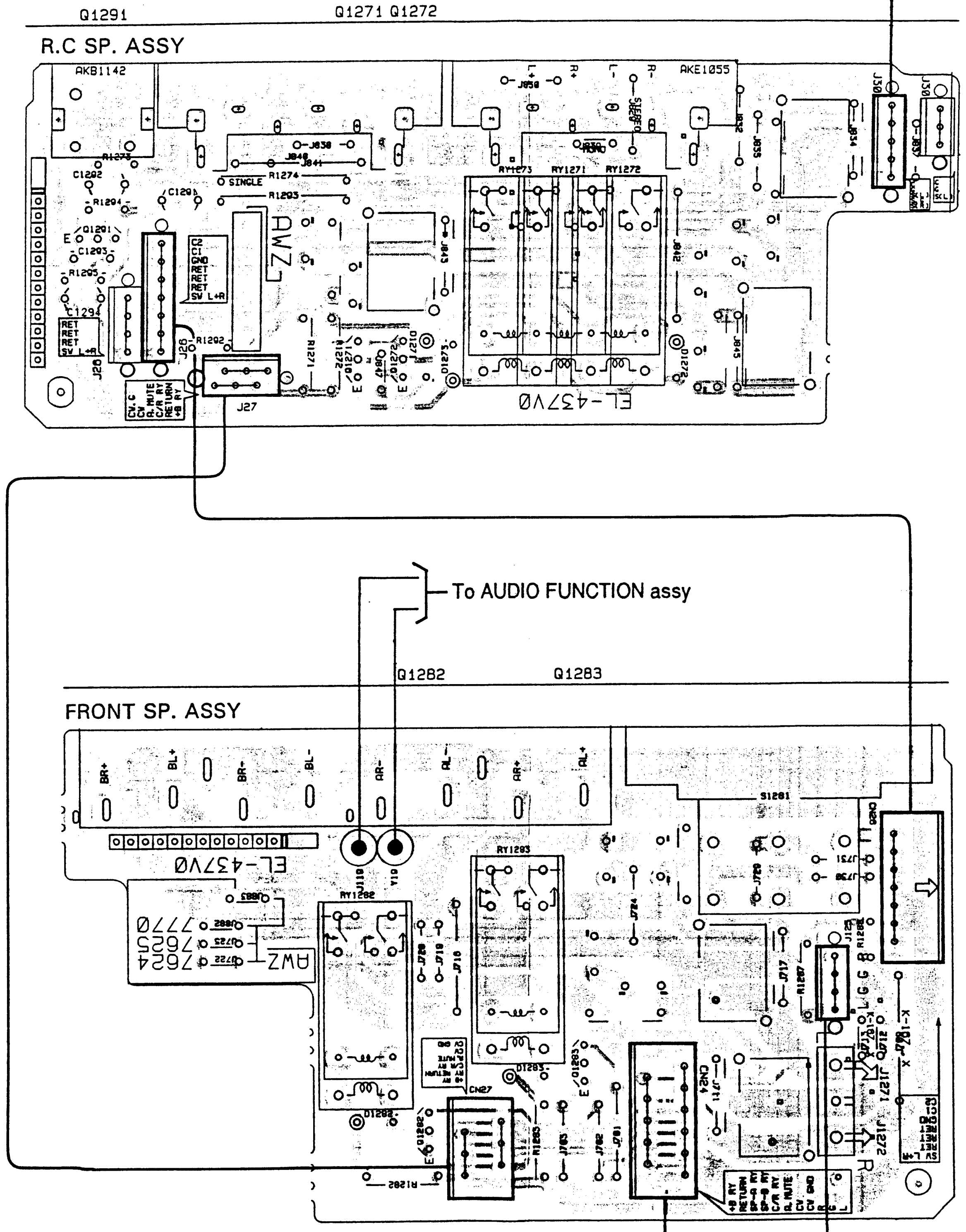
To PAL↔NTSC SWITCH S4 (SD TYPE ONLY)
2
3

To FL UCOM assy CN121

- This diagram is viewed from the mounted parts side.

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

To POWER SUPPLY assy CN30


Q1291
Q1271 Q1272
R.C SP. ASSY
AKB1142
AKE1055
AWZ
EL-437V0
J27
J26
Q1282
Q1283
FRONT SP. ASSY
BR+
BL+
BR-
BL-
AR-
AL-
AR+
AL+
RY1282
RY1283
CN24
CN27

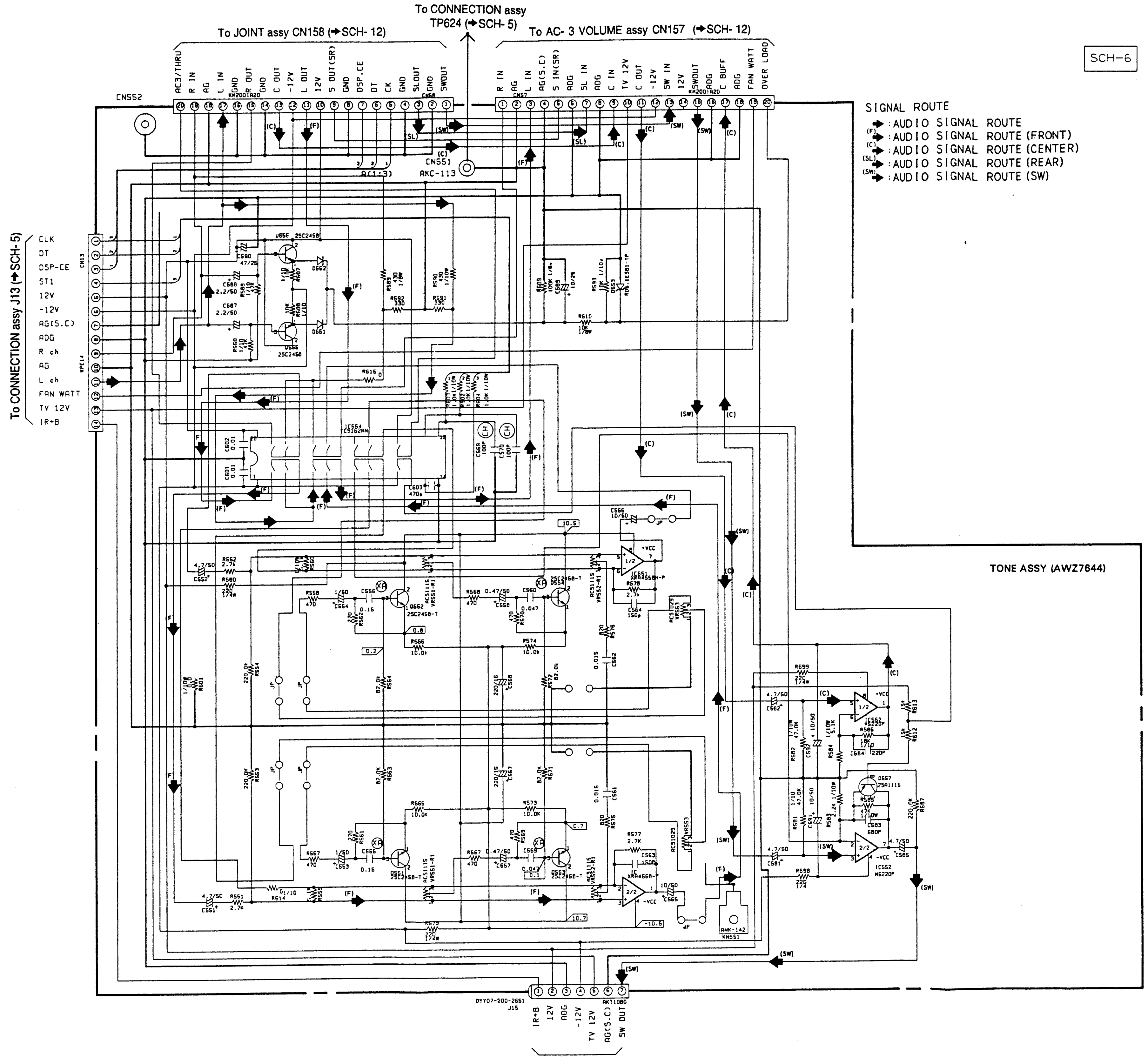
To AUDIO FUNCTION assy

To POWER SUPPLY assy J24

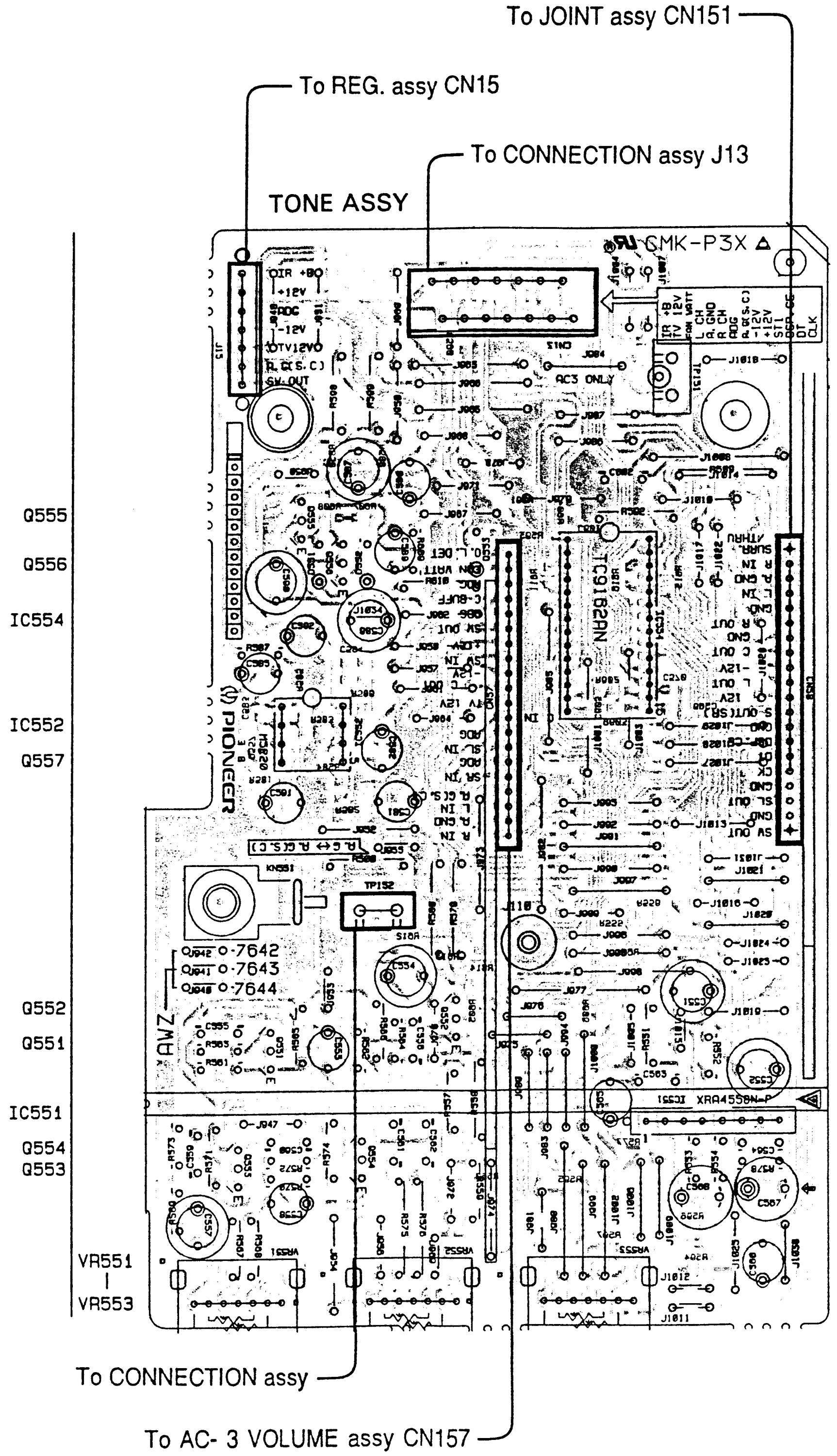
To POWER SUPPLY assy CN125

3.6 TONE ASSY

- This diagram is viewed from the mounted parts side.

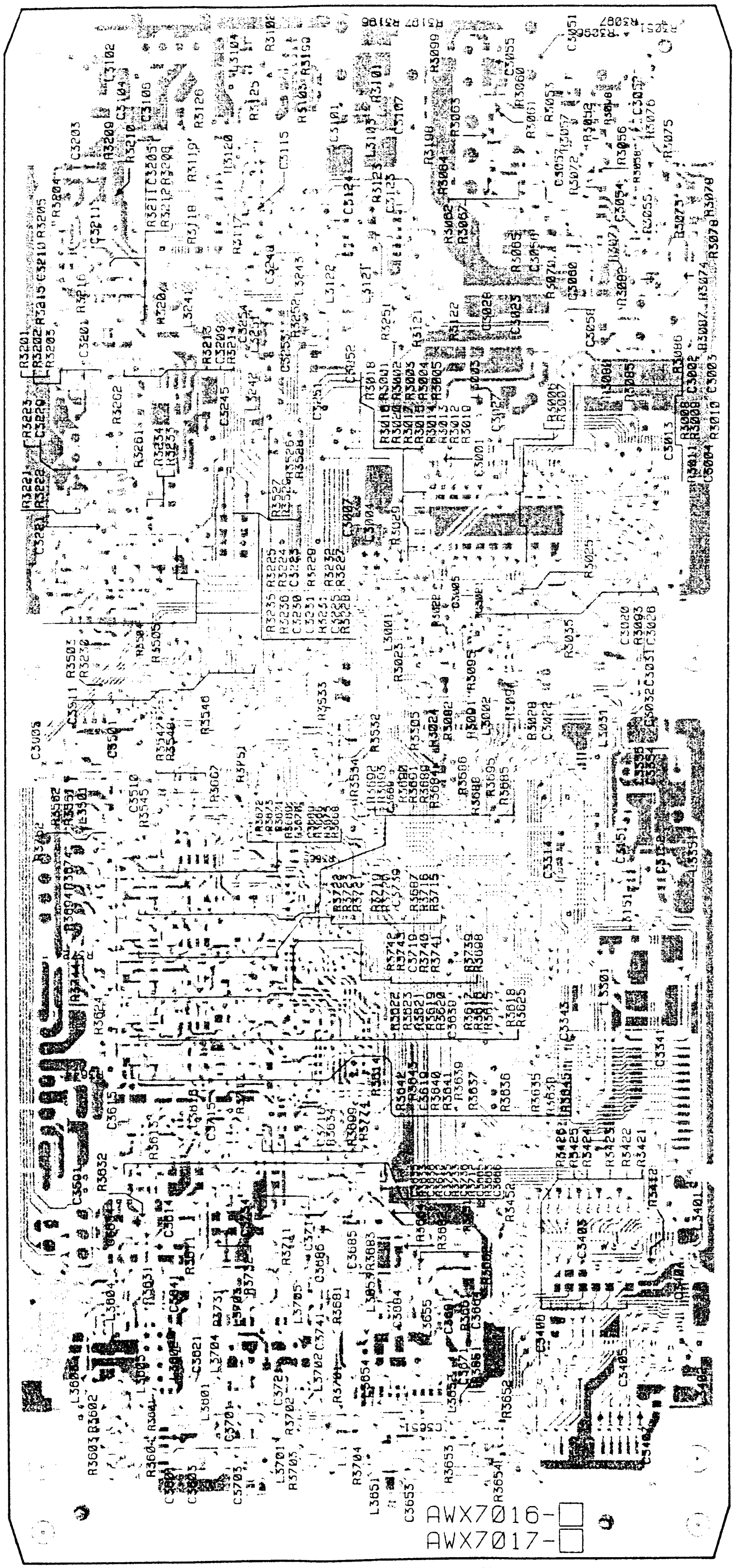

To CONNECTION assy TP624 (➜SCH- 5)
To JOINT assy CN158 (➜SCH- 12)
To AC- 3 VOLUME assy CN157 (➜SCH- 12)
SCH-6
CN552
CN551
AKC-113
To CONNECTION assy J13 (➜SCH-5)
CLK
DT
DSP-CE
ST1
12V
-12V
AG(S.C)
ADG
R ch
AG
L ch
FAN WATT
TV 12V
IR+B
TONE ASSY (AWZ7644)
IR+B
12V
ADG
-12V
TV 12V
AG(S.C)
SW OUT
J15
To REG. assy CN15 (➜SCH- 14)

SIGNAL ROUTE
- ➜ : AUDIO SIGNAL ROUTE
- (F) ➜ : AUDIO SIGNAL ROUTE (FRONT)
- (C) ➜ : AUDIO SIGNAL ROUTE (CENTER)
- (SL) ➜ : AUDIO SIGNAL ROUTE (REAR)
- (SW) ➜ : AUDIO SIGNAL ROUTE (SW)


To JOINT assy CN151
To REG. assy CN15
To CONNECTION assy J13
TONE ASSY
CMK-P3X
Q555
Q556
IC554
IC552
Q557
Q552
Q551
IC551
Q554
Q553
VR551
VR553
PIONEER
AWZ
7642
7643
7644
To CONNECTION assy
To AC- 3 VOLUME assy CN157

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

- This diagram is viewed from the gray colored foil side.
- This is a multi-layer PCB.
  But information for both sides is shown.

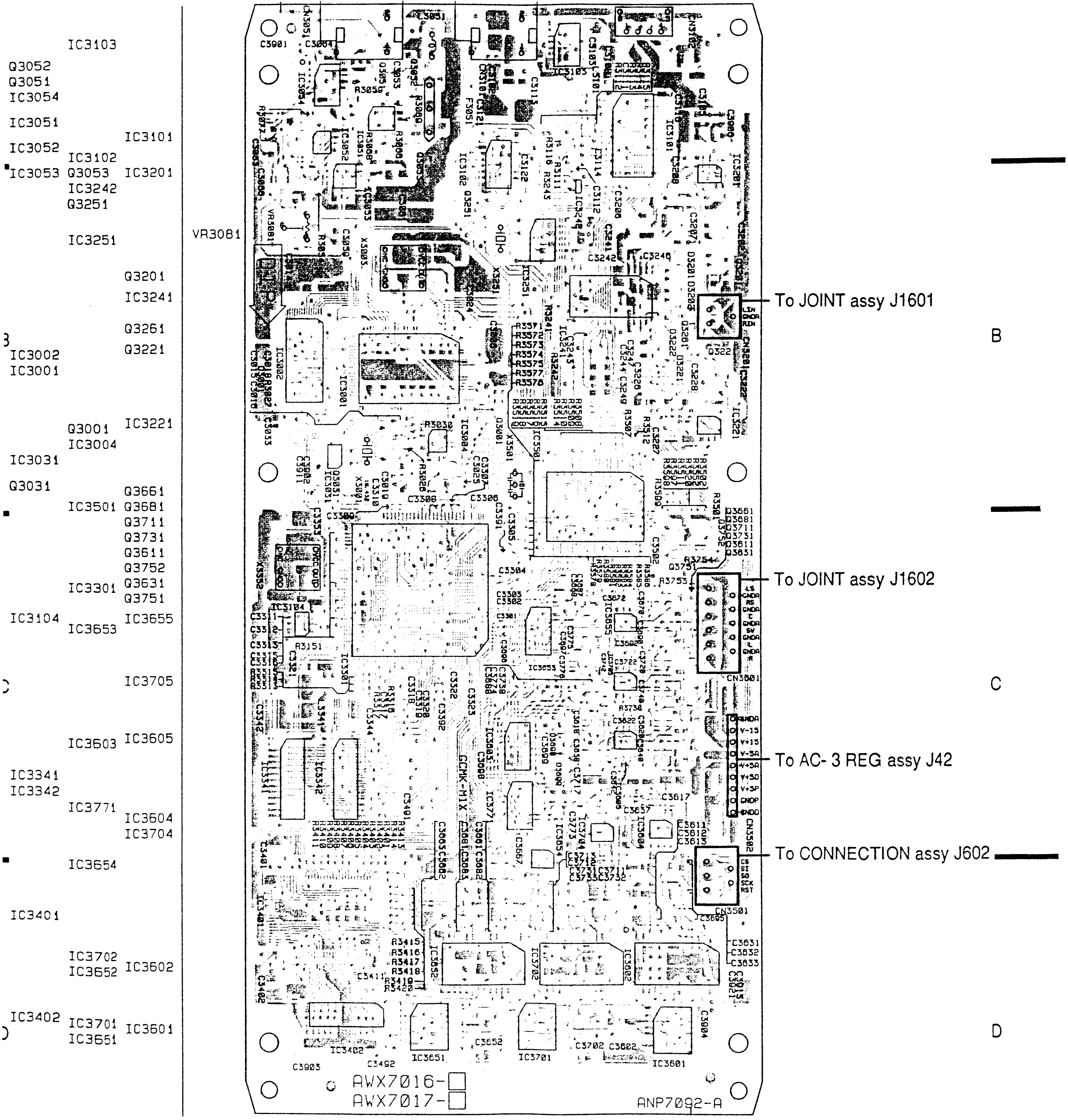


The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

3.7 AC-3 ASSY

- This diagram is viewed from the pink colored foil side.
- This is a multi-layer PCB.
But information for both sides is shown.

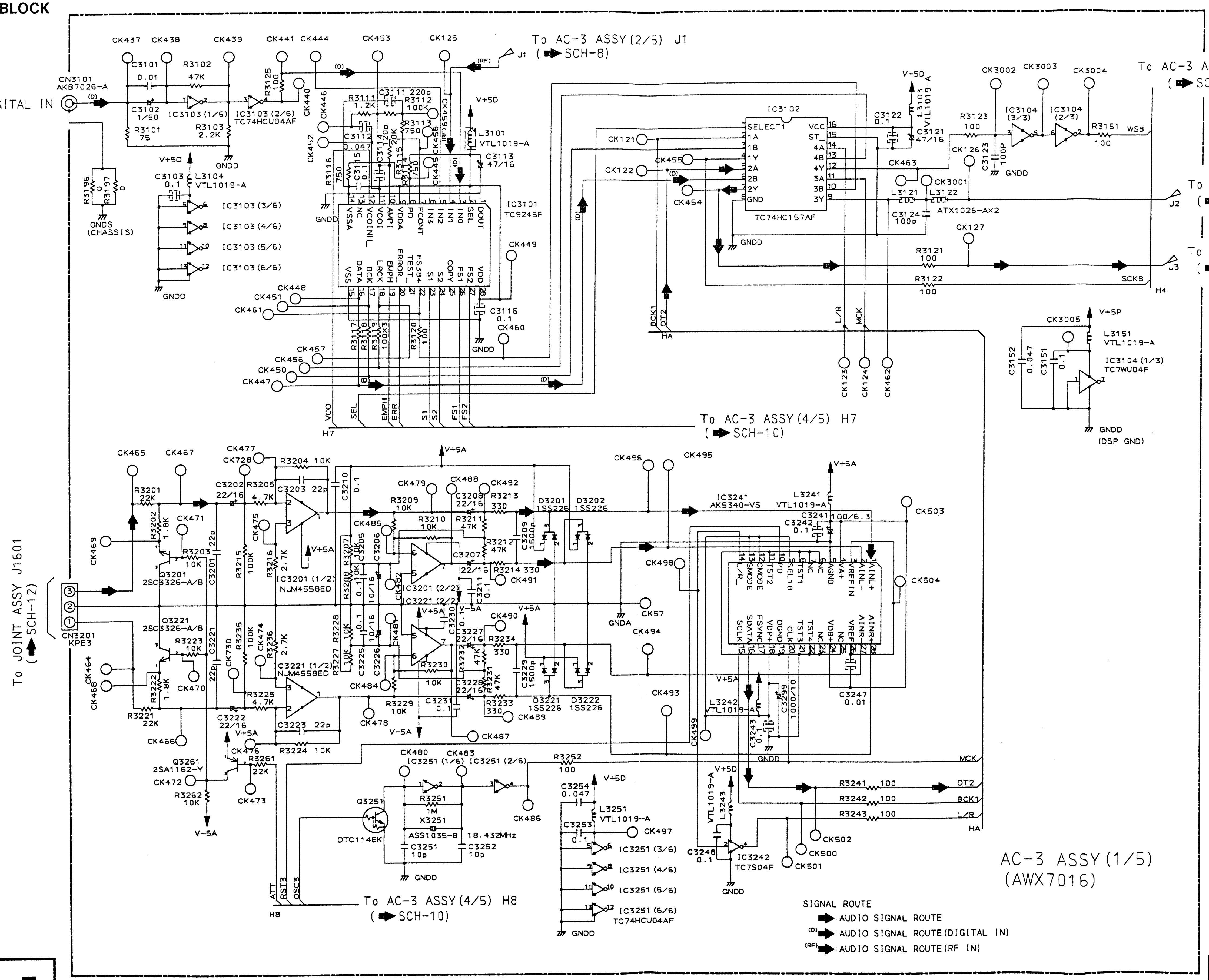
AC-3 ASSY


A
IC3103
Q3052
Q3051
IC3054
IC3051
IC3101
IC3052
IC3102
IC3053
Q3053
IC3201
IC3242
Q3251
IC3251
VR3081
Q3201
IC3241
Q3261
Q3221
B
IC3002
IC3001
Q3001
IC3221
IC3004
IC3031
Q3031
Q3661
IC3501
Q3681
Q3711
Q3731
Q3611
Q3752
IC3301
Q3631
Q3751
IC3104
IC3655
IC3653
C
IC3705
IC3603
IC3605
IC3341
IC3342
IC3771
IC3604
IC3704
IC3654
IC3401
IC3702
IC3652
IC3602
IC3402
IC3701
IC3601
IC3651
D
To JOINT assy J1601
To JOINT assy J1602
To AC- 3 REG assy J42
To CONNECTION assy J602
CN3201
CN3601
CN3502
CN3501
GCMK-MIX
AWX7016-☐
AWX7017-☐
ANP7092-A

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

● AC-3 ASSY (1/5)
DIR, A/D BLOCK

SCH-7


DIGITAL IN
CN3101 AKB7026-A
To AC-3 ASSY (2/5) J1 (➡ SCH-8)
To AC-3 ASSY (3/5) H4 (➡ SCH-9)
To AC-3 ASSY (3/5) J2 (➡ SCH-9)
To AC-3 ASSY (3/5) J3 (➡ SCH-9)
To AC-3 ASSY (4/5) H7 (➡ SCH-10)
To AC-3 ASSY (4/5) H8 (➡ SCH-10)
To JOINT ASSY J1601 (⬆ SCH-12)
CN3201 KPE3
IC3101 TC9245F
IC3102 TC74HC157AF
IC3103 (1/6) TC74HCU04AF
IC3104 (1/3) TC7WU04F
IC3201 (1/2) NJM4558ED
IC3221 (1/2) NJM4558ED
IC3241 AK5340-VS
IC3242 TC7S04F
IC3251 (6/6) TC74HCU04AF
X3251 ASS1035-B 18.432MHz
Q3201 2SC3326-A/B
Q3221 2SC3326-A/B
Q3261 2SA1162-Y
Q3251 DTC114EK
D3201 1SS226
D3202 1SS226
D3221 1SS226
D3222 1SS226
L3101 VTL1019-A
L3103 VTL1019-A
L3104 VTL1019-A
L3151 VTL1019-A
L3241 VTL1019-A
L3242 VTL1019-A
L3243 VTL1019-A
L3251 VTL1019-A
L3121 L3122 ATX1026-Ax2
V+5D
V+5A
V-5A
V+5P
GNDD
GNDA
GNDS (CHASSIS)
GNDD (DSP GND)
WS8
SCK8
MCK
DT2
BCK1
L/R
VCO
SEL
EMPH
ERR
S1
S2
FS1
FS2
ATT
RST3
OSC3
AC-3 ASSY (1/5) (AWX7016)
SIGNAL ROUTE
➡: AUDIO SIGNAL ROUTE
(D)➡: AUDIO SIGNAL ROUTE (DIGITAL IN)
(RF)➡: AUDIO SIGNAL ROUTE (RF IN)

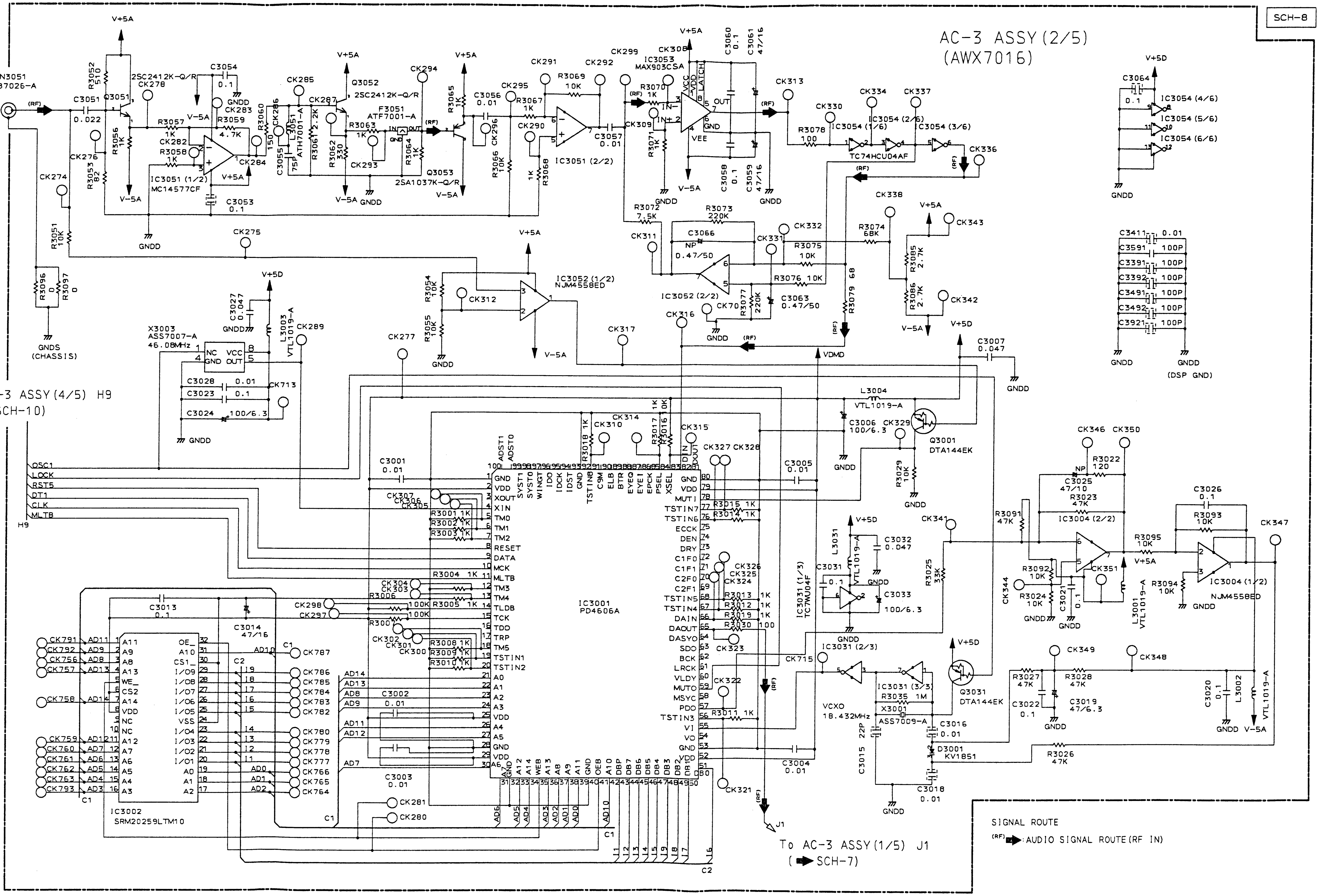
SCH-7

AC-3 ASSY (1/5)

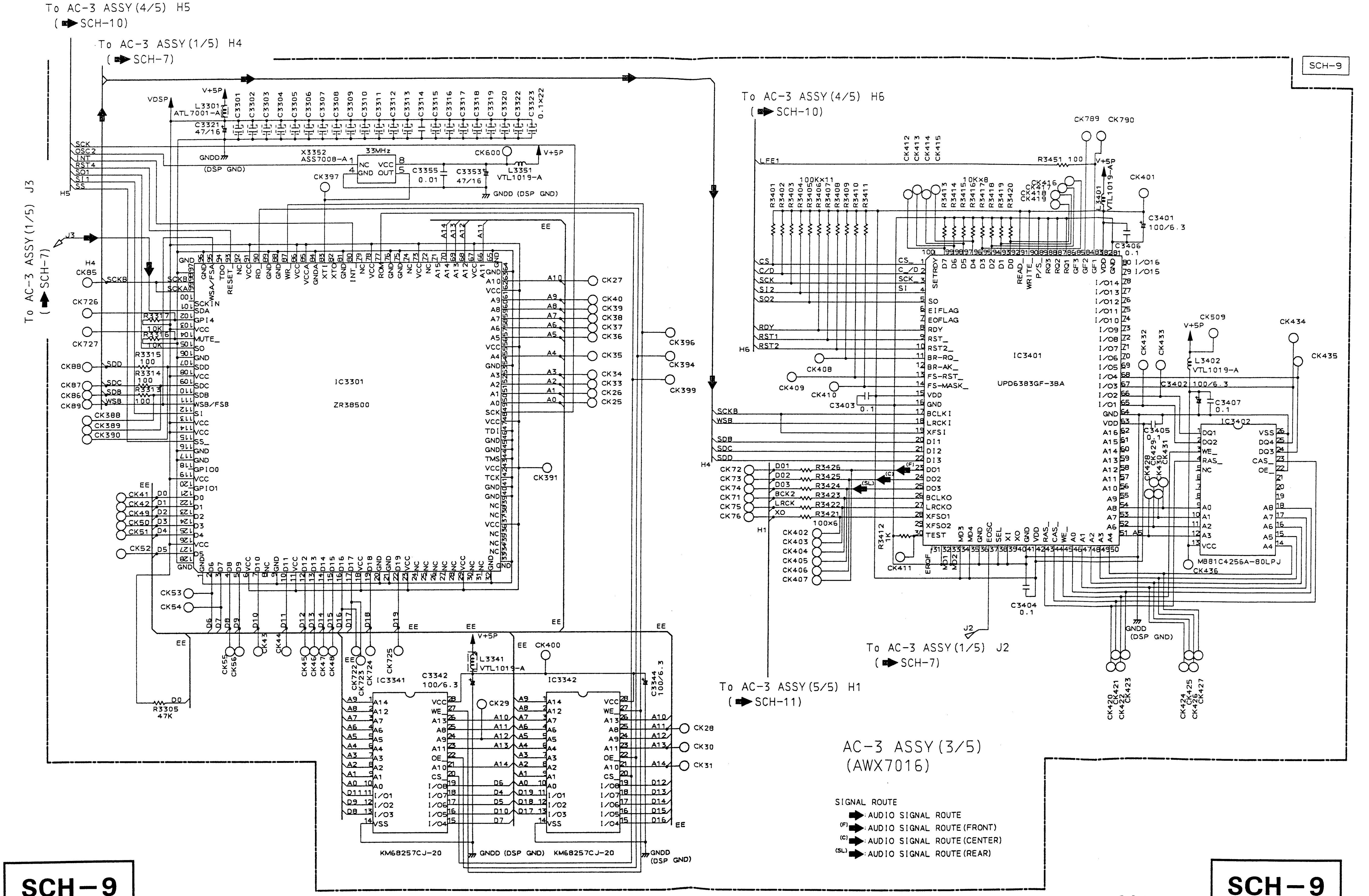
AC-3 ASSY (1/5)

SCH-7

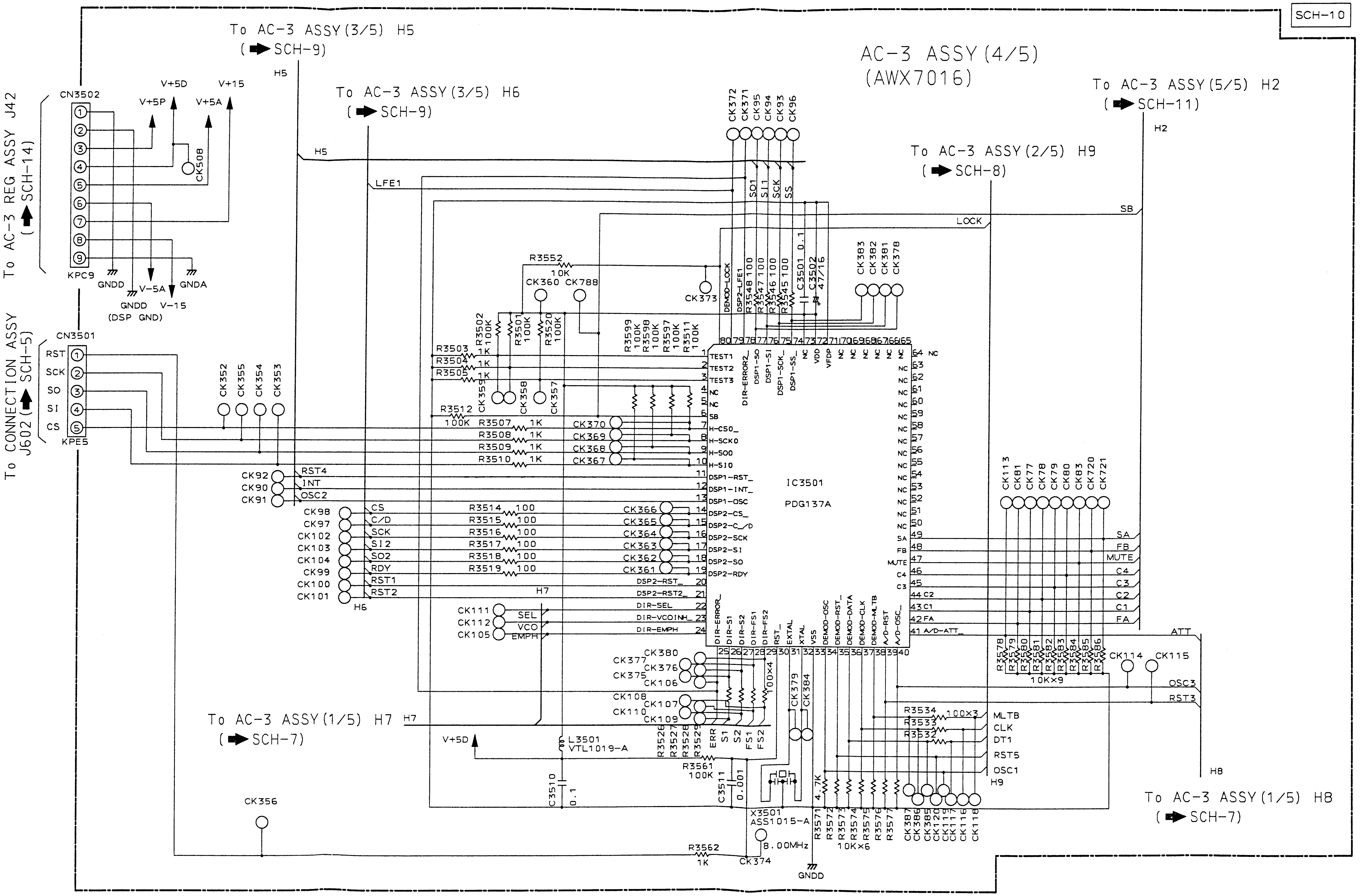
● AC-3 ASSY (2/5) DEMODULATOR BLOCK


SCH−8
AC-3 ASSY (2/5)
(AWX7016)
CN3051
AKB7026−A
RF (LD)
GNDS
(CHASSIS)
Q3051 2SC2412K−Q/R
Q3052 2SC2412K−Q/R
Q3053 2SA1037K−Q/R
F3051 ATF7001−A
L3051 ATH7001−A
IC3051 (1/2) MC14577CF
IC3051 (2/2)
IC3053 MAX903CSA
IC3054 (1/6) TC74HCU04AF
IC3054 (2/6)
IC3054 (3/6)
IC3054 (4/6)
IC3054 (5/6)
IC3054 (6/6)
IC3052 (1/2) NJM4558ED
IC3052 (2/2)
X3003 ASS7007−A 46.08MHz
L3003 VTL1019−A
L3004 VTL1019−A
Q3001 DTA144EK
Q3031 DTA144EK
IC3001 PD4606A
IC3002 SRM20259LTM10
IC3031 (1/3) TC7WU04F
IC3031 (2/3)
IC3031 (3/3)
X3001 ASS7009−A
VCXO 18.432MHz
D3001 KV1851
IC3004 (1/2) NJM4558ED
IC3004 (2/2)
L3001 VTL1019−A
L3002 VTL1019−A
To AC-3 ASSY (4/5) H9
(➡ SCH-10)
OSC1
LOCK
RST5
DT1
CLK
MLTB
H9
To AC-3 ASSY (1/5) J1
(➡ SCH-7)
J1
V+5A
V−5A
V+5D
GNDD
VDMD
(DSP GND)
SIGNAL ROUTE
(RF)➡ : AUDIO SIGNAL ROUTE (RF IN)
1
2
3
4
5
6
A
B
C
D

● AC-3 ASSY (3/5)
DSP BLOCK

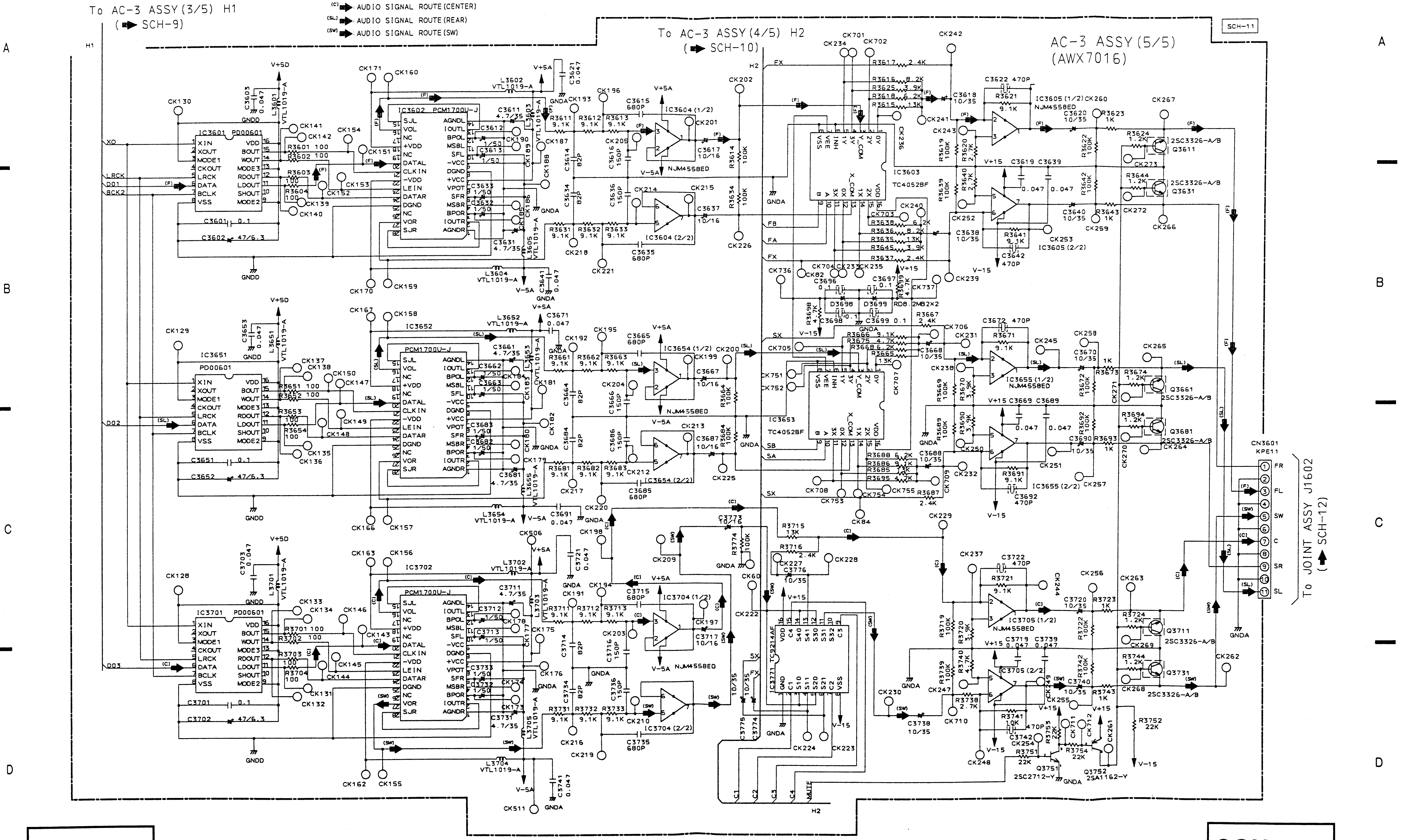

To AC-3 ASSY (4/5) H5
(➡ SCH-10)
To AC-3 ASSY (1/5) H4
(➡ SCH-7)
To AC-3 ASSY (1/5) J3
(➡ SCH-7)
To AC-3 ASSY (4/5) H6
(➡ SCH-10)
To AC-3 ASSY (1/5) J2
(➡ SCH-7)
To AC-3 ASSY (5/5) H1
(➡ SCH-11)
SCH-9
IC3301
ZR38500
IC3401
UPD6383GF-38A
IC3402
MB81C4256A-80LPJ
IC3341
KM68257CJ-20
IC3342
KM68257CJ-20
X3352
ASS7008-A
33MHz
L3301
ATL7001-A
L3351
VTL1019-A
L3341
VTL1019-A
L3401
VTL1019-A
L3402
VTL1019-A
C3321 47/16
C3353 47/16
C3355 0.01
C3323 0.1×22
C3342 100/6.3
C3344 100/6.3
C3401 100/6.3
C3402 100/6.3
C3403 0.1
C3404 0.1
C3406 0.1
C3407 0.1
R3305 47K
R3315 100
R3314 100
R3313 100
R3317 10K
R3316 10K
R3401–R3411 100K×11
R3413–R3420 10K×8
R3421–R3426 100×6
R3412 1K
R3451 100
V+5P
VDSP
GNDD (DSP GND)
EE
AC-3 ASSY (3/5)
(AWX7016)
SIGNAL ROUTE
➡ : AUDIO SIGNAL ROUTE
(F)➡ : AUDIO SIGNAL ROUTE (FRONT)
(C)➡ : AUDIO SIGNAL ROUTE (CENTER)
(SL)➡ : AUDIO SIGNAL ROUTE (REAR)

- **AC-3 ASSY (4/5)**
  UCOM BLOCK

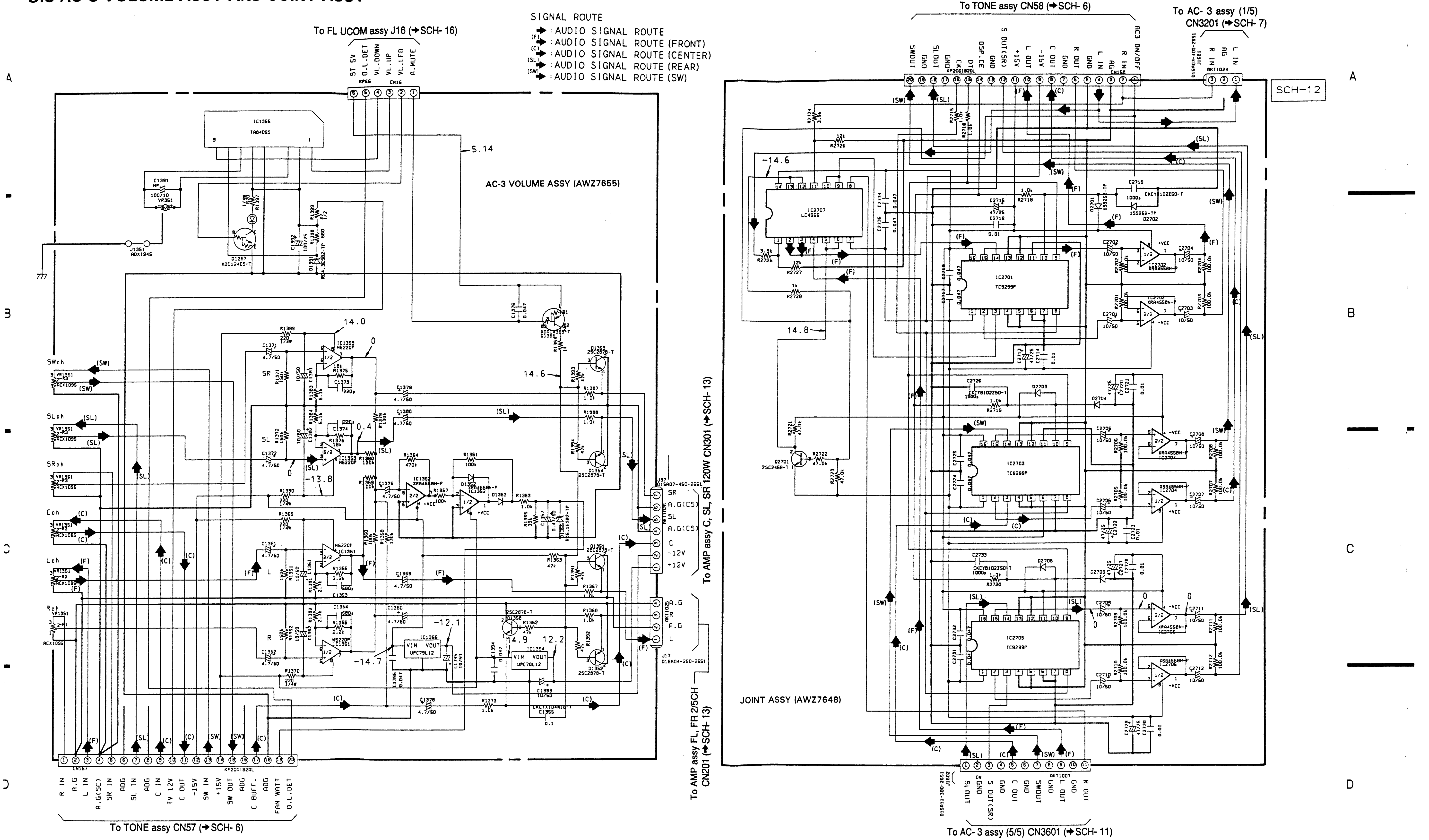

SCH-10
AC-3 ASSY (4/5)
(AWX7016)
To AC-3 ASSY (3/5) H5
(➡ SCH-9)
To AC-3 ASSY (3/5) H6
(➡ SCH-9)
To AC-3 ASSY (5/5) H2
(➡ SCH-11)
To AC-3 ASSY (2/5) H9
(➡ SCH-8)
To AC-3 ASSY (1/5) H7
(➡ SCH-7)
To AC-3 ASSY (1/5) H8
(➡ SCH-7)
To AC-3 REG ASSY J42
(⬆ SCH-14)
To CONNECTION ASSY
J602 (⬆ SCH-5)
CN3502
KPC9
V+5D
V+15
V+5P
V+5A
CK508
GNDD
V-5A
GNDA
V-15
(DSP GND)
CN3501
KPE5
RST
SCK
SO
SI
CS
CK352
CK355
CK354
CK353
CK92
CK90
CK91
RST4
INT
OSC2
CK98
CK97
CK102
CK103
CK104
CK99
CK100
CK101
CS
C/D
SCK
SI2
SO2
RDY
RST1
RST2
H5
H6
H7
LFE1
R3552
10K
CK360
CK788
CK373
R3502 100K
R3501 100K
R3520 100K
R3503 1K
R3504 1K
R3505 1K
R3512 100K
CK359
CK358
CK357
R3599 100K
R3598 100K
R3597 100K
R3511 100K
R3507 1K
R3508 1K
R3509 1K
R3510 1K
CK370
CK369
CK368
CK367
R3514 100
R3515 100
R3516 100
R3517 100
R3518 100
R3519 100
CK366
CK365
CK364
CK363
CK362
CK361
CK111
CK112
CK105
SEL
VCO
EMPH
CK372
CK371
CK95
CK94
CK93
CK96
SO1
SI1
SCK
SS
R3548 100
R3547 100
R3546 100
R3545 100
C3501 0.1
C3502 47/16
CK383
CK382
CK381
CK378
IC3501
PDG137A
TEST1
TEST2
TEST3
NC
SB
H-CS0_
H-SCK0
H-SO0
H-SI0
DSP1-RST_
DSP1-INT_
DSP1-OSC
DSP2-CS_
DSP2-C_/D
DSP2-SCK
DSP2-SI
DSP2-SO
DSP2-RDY
DSP2-RST_
DSP2-RST2_
DIR-SEL
DIR-VCOINH_
DIR-EMPH
DEMOD-LOCK
DSP2-LFE1
DIR-ERROR2_
DSP1-SO
DSP1-SI
DSP1-SCK_
DSP1-SS_
VDD
VFDP
DIR-ERROR_
DIR-S1
DIR-S2
DIR-FS1
DIR-FS2
RST_
EXTAL
XTAL
VSS
DEMOD-OSC
DEMOD-RST_
DEMOD-DATA
DEMOD-CLK
DEMOD-MLTB
A/D-RST
A/D-OSC_
A/D-ATT_
SA
FB
MUTE
C4
C3
C2
C1
FA
LOCK
SB
H2
CK113
CK81
CK77
CK78
CK79
CK80
CK83
CK720
CK721
R3578
R3579
R3580
R3581
R3582
R3583
R3584
R3585
R3586
10K×9
CK114
CK115
ATT
OSC3
RST3
H8
CK380
CK377
CK376
CK375
CK106
CK108
CK107
CK110
CK109
100×4
CK379
CK384
R3526
R3527
R3528
R3529
ERR
S1
S2
FS1
FS2
R3561
100K
V+5D
L3501
VTL1019-A
C3510
0.1
C3511
0.001
X3501
ASS1015-A
8.00MHz
4.7K
R3571
R3572
R3573
R3574
R3575
R3576
R3577
10K×6
R3534
R3533
R3532
100×3
MLTB
CLK
DT1
RST5
OSC1
H9
CK387
CK386
CK385
CK120
CK119
CK117
CK116
CK118
CK356
R3562
1K
CK374
GNDD

● AC-3 ASSY (5/5)
D/A BLOCK

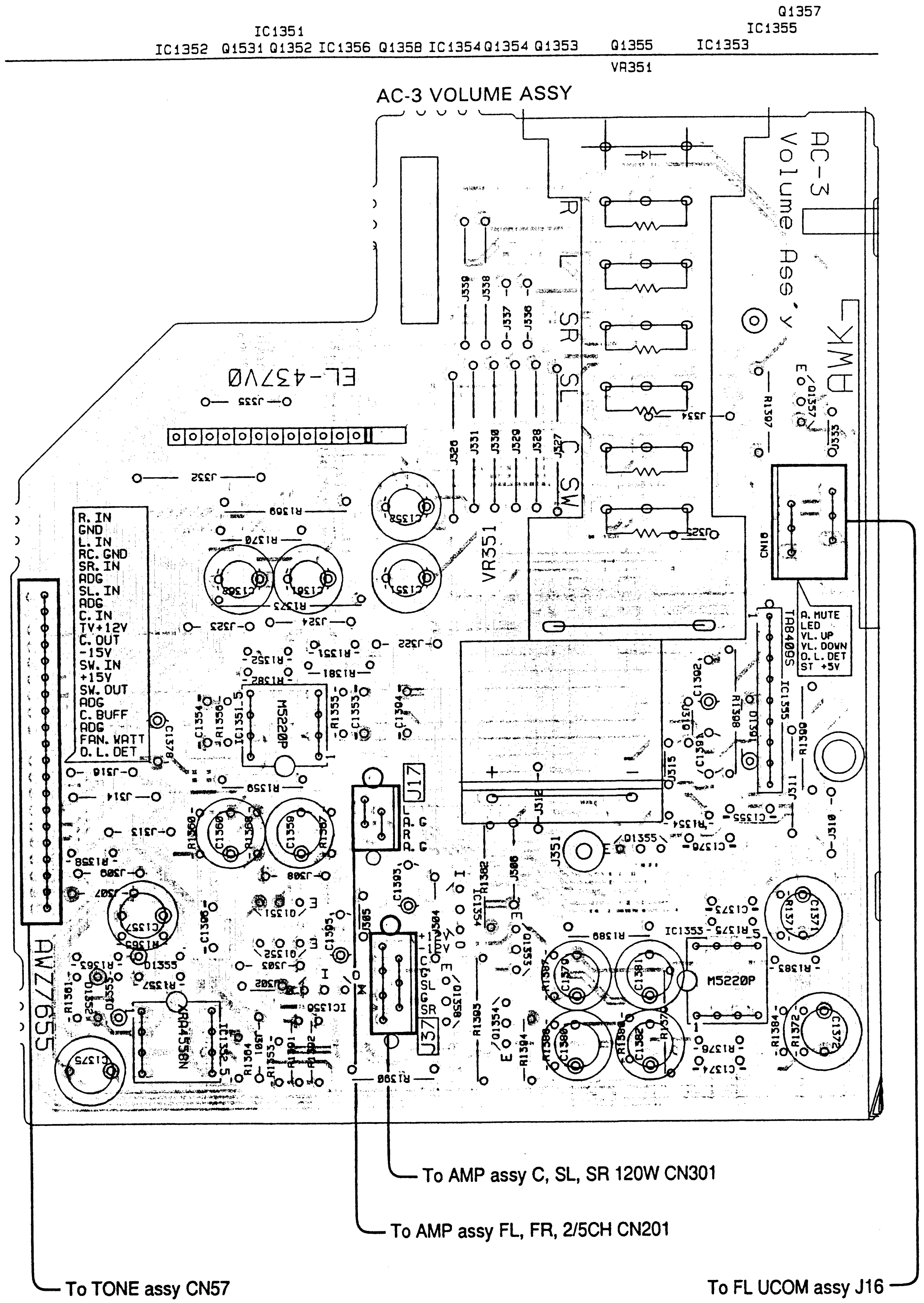
SIGNAL ROUTE
(F) ➡ AUDIO SIGNAL ROUTE (FRONT)
(C) ➡ AUDIO SIGNAL ROUTE (CENTER)
(SL) ➡ AUDIO SIGNAL ROUTE (REAR)
(SW) ➡ AUDIO SIGNAL ROUTE (SW)

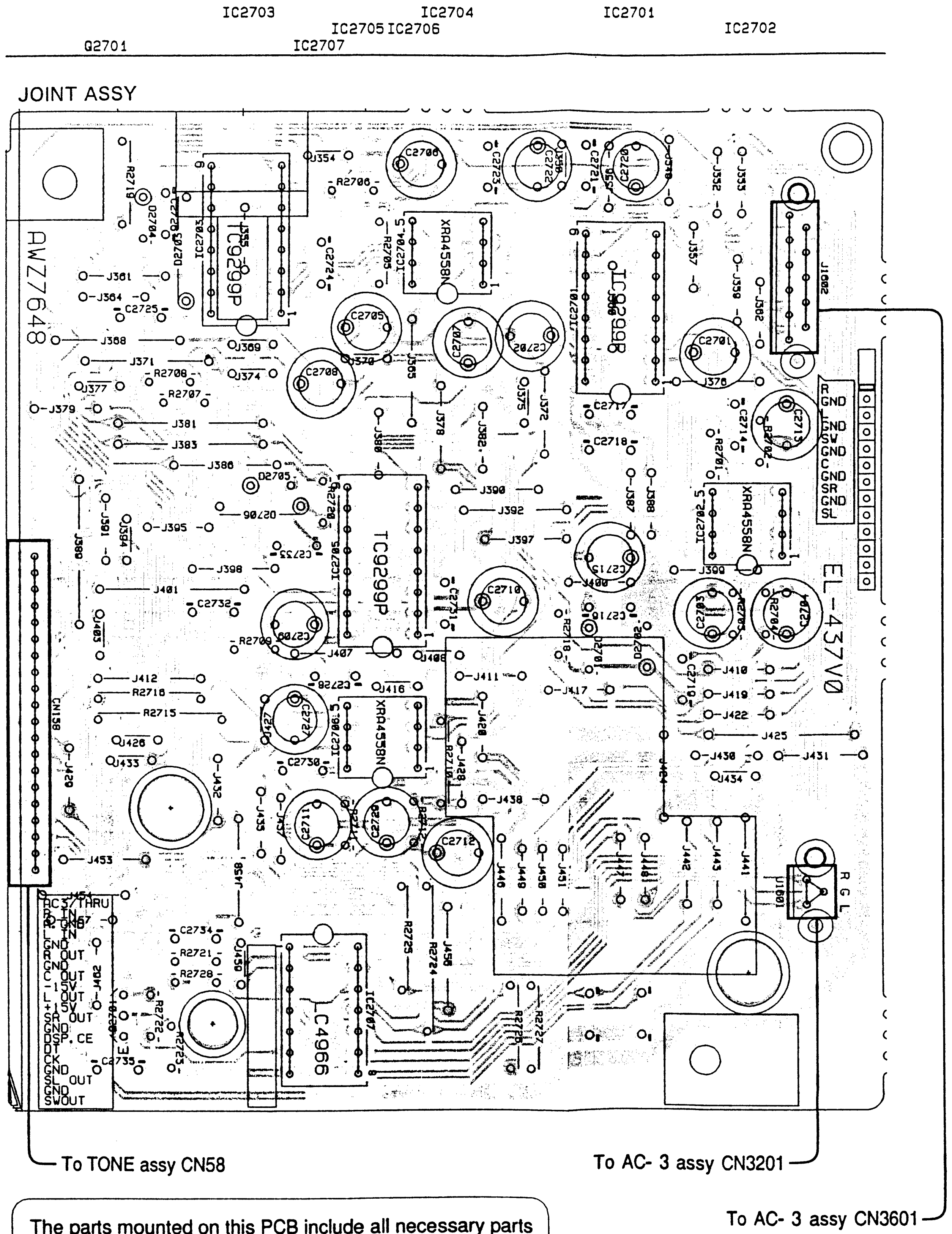

To AC-3 ASSY (3/5) H1
(➡ SCH-9)
To AC-3 ASSY (4/5) H2
(➡ SCH-10)
AC-3 ASSY (5/5)
(AWX7016)
SCH-11
A
B
C
D
H1
H2
XO
LRCK
D01
BCK2
D02
D03
FX
FB
FA
SX
SB
SA
V+5D
V+5A
V-5A
V+15
V-15
GNDD
GNDA
IC3601 PD0060I
IC3651 PD0060I
IC3701 PD0060I
XIN
XOUT
MODE1
CKOUT
LRCK
DATA
BCLK
VSS
VDD
BOUT
WOUT
MODE3
RDOUT
LDOUT
SHOUT
MODE2
IC3602 PCM1700U-J
IC3652 PCM1700U-J
IC3702 PCM1700U-J
SJL
VOL
NC
+VDD
DATAL
CLKIN
-VDD
LEIN
DATAR
DGND
VOR
SJR
AGNDL
IOUTL
BPOL
MSBL
SFL
-VCC
+VCC
VPOT
SFR
MSBR
BPOR
IOUTR
AGNDR
IC3604 (1/2)
IC3604 (2/2)
IC3654 (1/2)
IC3654 (2/2)
IC3704 (1/2)
IC3704 (2/2)
NJM4558ED
IC3603 TC4052BF
IC3653 TC4052BF
IC3605 (1/2)
IC3605 (2/2)
IC3655 (1/2)
IC3655 (2/2)
IC3705 (1/2)
IC3705 (2/2)
IC3771 TC9214AF
L3601 VTL1019-A
L3602 VTL1019-A
L3603 VTL1019-A
L3604 VTL1019-A
L3605 VTL1019-A
L3651 VTL1019-A
L3652 VTL1019-A
L3653 VTL1019-A
L3654 VTL1019-A
L3655 VTL1019-A
L3701 VTL1019-A
L3702 VTL1019-A
L3703 VTL1019-A
L3704 VTL1019-A
L3705 VTL1019-A
Q3611 2SC3326-A/B
Q3631 2SC3326-A/B
Q3661 2SC3326-A/B
Q3681 2SC3326-A/B
Q3711 2SC3326-A/B
Q3731 2SC3326-A/B
Q3751 2SC2712-Y
Q3752 2SA1162-Y
D3698
D3699
RD8.2MB2×2
CN3601 KPE11
1 FR
2 FL
3 FL
4
5 SW
6
7 C
8
9 SR
10
11 SL
To JOINT ASSY J1602
(➡ SCH-12)
C1
C2
C3
C4
MUTE

3.8 AC-3 VOLUME ASSY AND JOINT ASSY


SIGNAL ROUTE
:AUDIO SIGNAL ROUTE
(F) :AUDIO SIGNAL ROUTE (FRONT)
(C) :AUDIO SIGNAL ROUTE (CENTER)
(SL) :AUDIO SIGNAL ROUTE (REAR)
(SW) :AUDIO SIGNAL ROUTE (SW)
To FL UCOM assy J16 (→SCH-16)
ST 5V
O.L.DET
VL.DOWN
VL.UP
VL.LED
A.MUTE
KPE6
CN16
IC1355
TA8409S
AC-3 VOLUME ASSY (AWZ7655)
J1351
RDX1046
D1357
IC1353
M5220P
IC1351
M5220P
IC1352
XRA4558N-P
IC1356
UPC79L12
IC1354
UPC78L12
VIN VOUT
SWch
SLch
SRch
Cch
Lch
Rch
VR1351
RCX1095
14.0
14.6
5.14
-13.8
-14.7
-12.1
12.2
14.9
J37
D15A07-450-2651
SR
A.G(CS)
SL
A.G(CS)
C
-12V
+12V
A.G
R
A.G
L
J17
D15A04-250-2651
To AMP assy C, SL, SR 120W CN301 (→SCH-13)
To AMP assy FL, FR 2/5CH CN201 (→SCH-13)
CN157
KP200182OL
R IN
A.G
L IN
A.G(SC)
SR IN
ADG
SL IN
ADG
C IN
TV 12V
C OUT
-15V
SW IN
+15V
SW OUT
ADG
C BUFF.
ADG
FAN WATT
O.L.DET
To TONE assy CN57 (→SCH-6)
To TONE assy CN58 (→SCH-6)
SWOUT
GND
SLOUT
GND
CK
DT
DSP.CE
GND
S OUT(SR)
+15V
L OUT
-15V
C OUT
GND
R OUT
GND
L IN
AG
R IN
AC3 ON/OFF
KP200182OL
CN158
To AC-3 assy (1/5) CN3201 (→SCH-7)
D15A03-400-2651
J1801
AKT1024
R IN
AG
L IN
SCH-12
-14.6
14.8
IC2707
LC4966
IC2701
TC9299P
IC2702
XRA4558N
IC2703
TC9299P
IC2704
XRA4558N
IC2705
TC9299P
IC2706
XRA4558N
Q2701
2SC2458
JOINT ASSY (AWZ7648)
AKT1007
D15A11-300-2651
J1602
SLOUT
GND
GND
S OUT(SR)
GND
C OUT
GND
SWOUT
GND
L OUT
GND
R OUT
To AC-3 assy (5/5) CN3601 (→SCH-11)
1
2
3
4
5
6
A
B
C
D

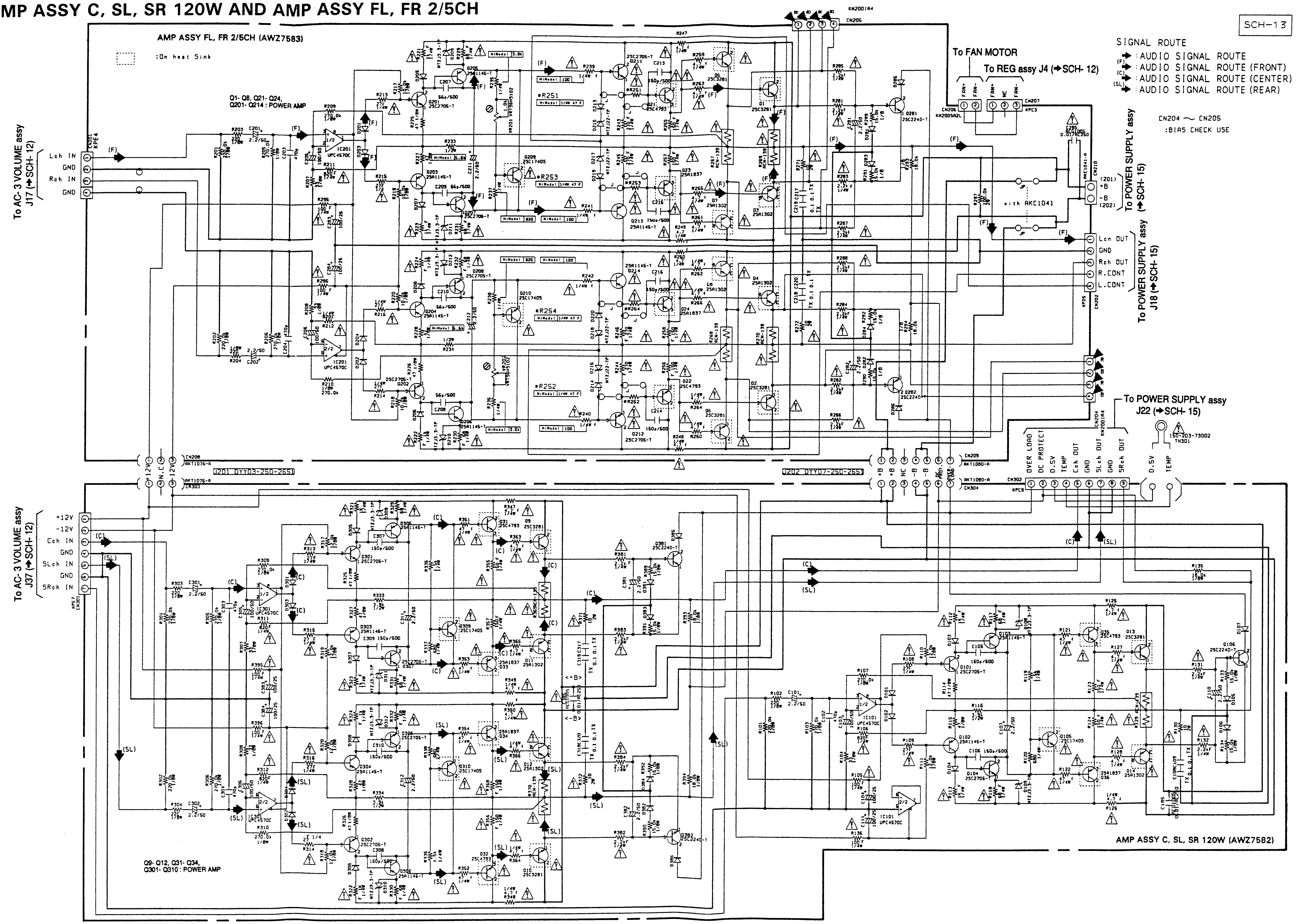
- This diagram is viewed from the mounted parts side.


IC1351
IC1352 Q1531 Q1352 IC1356 Q1358 IC1354 Q1354 Q1353 Q1355 IC1353
Q1357
IC1355
VR351
AC-3 VOLUME ASSY
AC-3 Volume Ass'y
AWK-
EL-437V0
R L SR SL C SW
VR351
R.IN
GND
L.IN
RC.GND
SR.IN
ADG
SL.IN
ADG
C.IN
TV+12V
C.OUT
-15V
SW.IN
+15V
SW.OUT
ADG
C.BUFF
ADG
FAN.WATT
O.L.DET
A.MUTE
LED
VL.UP
VL.DOWN
O.L.DET
ST +5V
TA8409S
M5220P
XRA4558N
J17
J37
AWZ7655
To AMP assy C, SL, SR 120W CN301
To AMP assy FL, FR, 2/5CH CN201
To TONE assy CN57
To FL UCOM assy J16


IC2703
IC2704
IC2701
IC2702
IC2705 IC2706
Q2701
IC2707
JOINT ASSY
AWZ7648
TC9299P
XRA4558N
TC9298
TC9299P
XRA4558N
XRA4558N
EL-437V0
LC4966
R
GND
L
GND
C
GND
SR
GND
SL
AC3 THRU
R
GND
L
GND
R.OUT
GND
C.OUT
L.OUT
+15V
-15V
SR.OUT
GND
DSP.CE
DT
CK
GND
SL.OUT
GND
SW.OUT
R G L
To TONE assy CN58
To AC-3 assy CN3201
To AC-3 assy CN3601

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

3.9 AMP ASSY C, SL, SR 120W AND AMP ASSY FL, FR 2/5CH

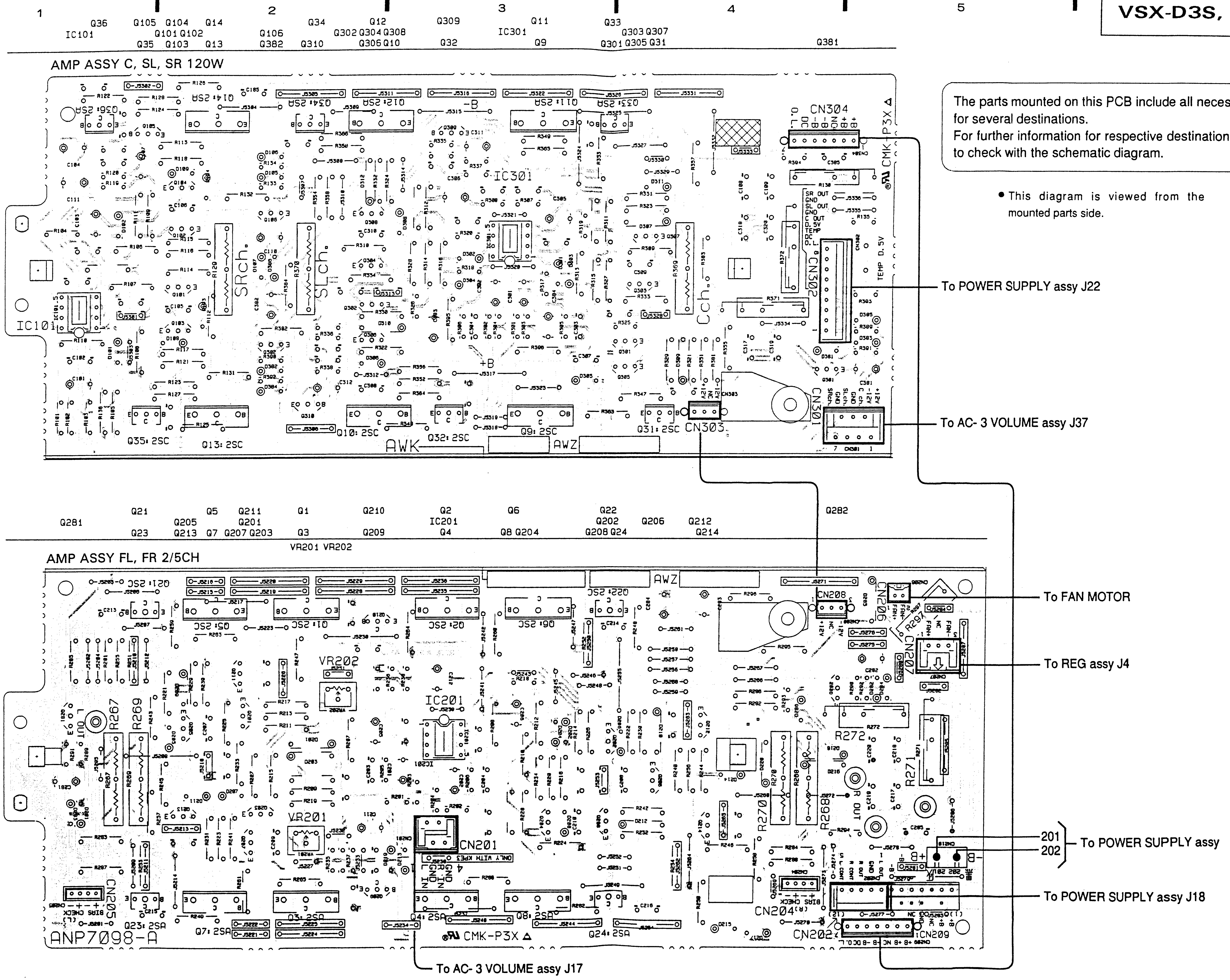

SCH-13
AMP ASSY FL, FR 2/5CH (AWZ7583)
:On heat Sink
Q1- Q8, Q21- Q24, Q201- Q214 : POWER AMP
To FAN MOTOR
To REG assy J4 (➜SCH- 12)
SIGNAL ROUTE
(F) : AUDIO SIGNAL ROUTE (FRONT)
(C) : AUDIO SIGNAL ROUTE (CENTER)
(SL) : AUDIO SIGNAL ROUTE (REAR)
CN204 ~ CN205 :BIAS CHECK USE
To AC-3 VOLUME assy J17 (➜SCH- 12)
Lch IN
GND
Rch IN
GND
To POWER SUPPLY assy (➜SCH- 15)
with AKC1041
Lch OUT
GND
Rch OUT
R.CONT
L.CONT
To POWER SUPPLY assy J18 (➜SCH- 15)
To POWER SUPPLY assy J22 (➜SCH- 15)
OVER LOAD
DC PROTECT
D.5V
TEMP
Cch OUT
GND
SLch OUT
GND
SRch OUT
To AC-3 VOLUME assy J37 (➜SCH- 12)
+12V
-12V
Cch IN
GND
SLch IN
GND
SRch IN
Q9- Q12, Q31- Q34, Q301- Q310 : POWER AMP
AMP ASSY C, SL, SR 120W (AWZ7582)
J201 DYY03-250-265
J202 DYY07-250-265
IC201 UPC4570C
IC301 UPC4570C
IC101 UPC4570C

SCH – 13 AMP ASSY C, SL, SR 120W, AMP ASSY FL, FR 2/5CH

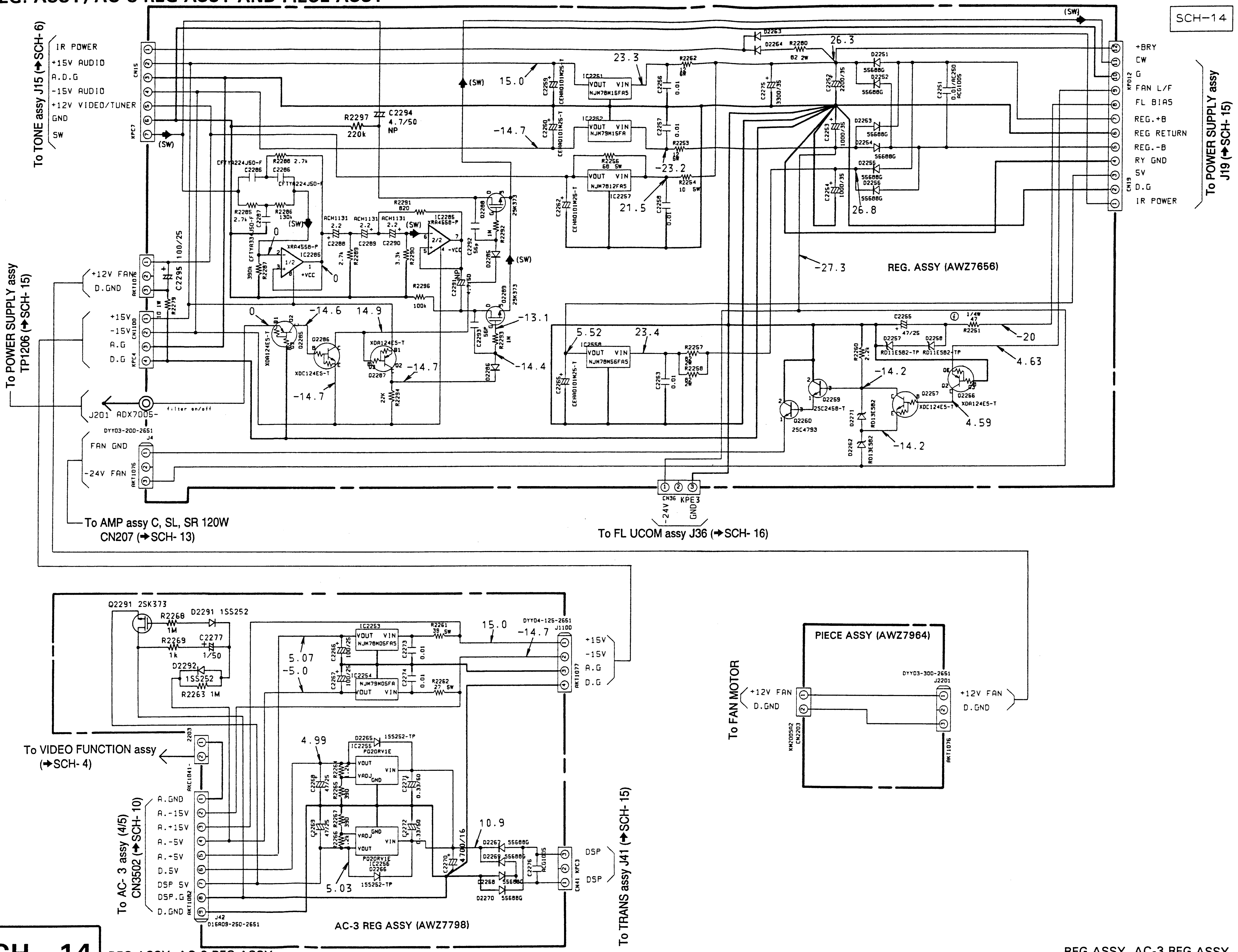
AMP ASSY C, SL, SR 120W, AMP ASSY FL, FR 2/5CH **SCH – 13**

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

- This diagram is viewed from the mounted parts side.


AMP ASSY C, SL, SR 120W
Q36 Q105 Q104 Q14 Q106 Q34 Q12 Q309 Q11 Q33
IC101 Q101 Q102 Q302 Q304 Q308 IC301 Q303 Q307
Q35 Q103 Q13 Q382 Q310 Q306 Q10 Q32 Q9 Q301 Q305 Q31 Q381
CN304
CN302
CN301
CN303
IC301
SRch.
SLch.
Cch.
CMK-P3X
AWK
AWZ
To POWER SUPPLY assy J22
To AC- 3 VOLUME assy J37
AMP ASSY FL, FR 2/5CH
Q21 Q5 Q211 Q1 Q210 Q2 Q6 Q22 Q282
Q281 Q205 Q201 Q3 IC201 Q202 Q206 Q212
Q23 Q213 Q7 Q207 Q203 Q209 Q4 Q8 Q204 Q208 Q24 Q214
VR201 VR202
IC201
CN201
CN202
CN204
CN205
CN206
CN207
CN208
CN209
ANP7098-A
CMK-P3X
To FAN MOTOR
To REG assy J4
201
202
To POWER SUPPLY assy
To POWER SUPPLY assy J18
To AC- 3 VOLUME assy J17
1 2 3 4 5 6
A B C D

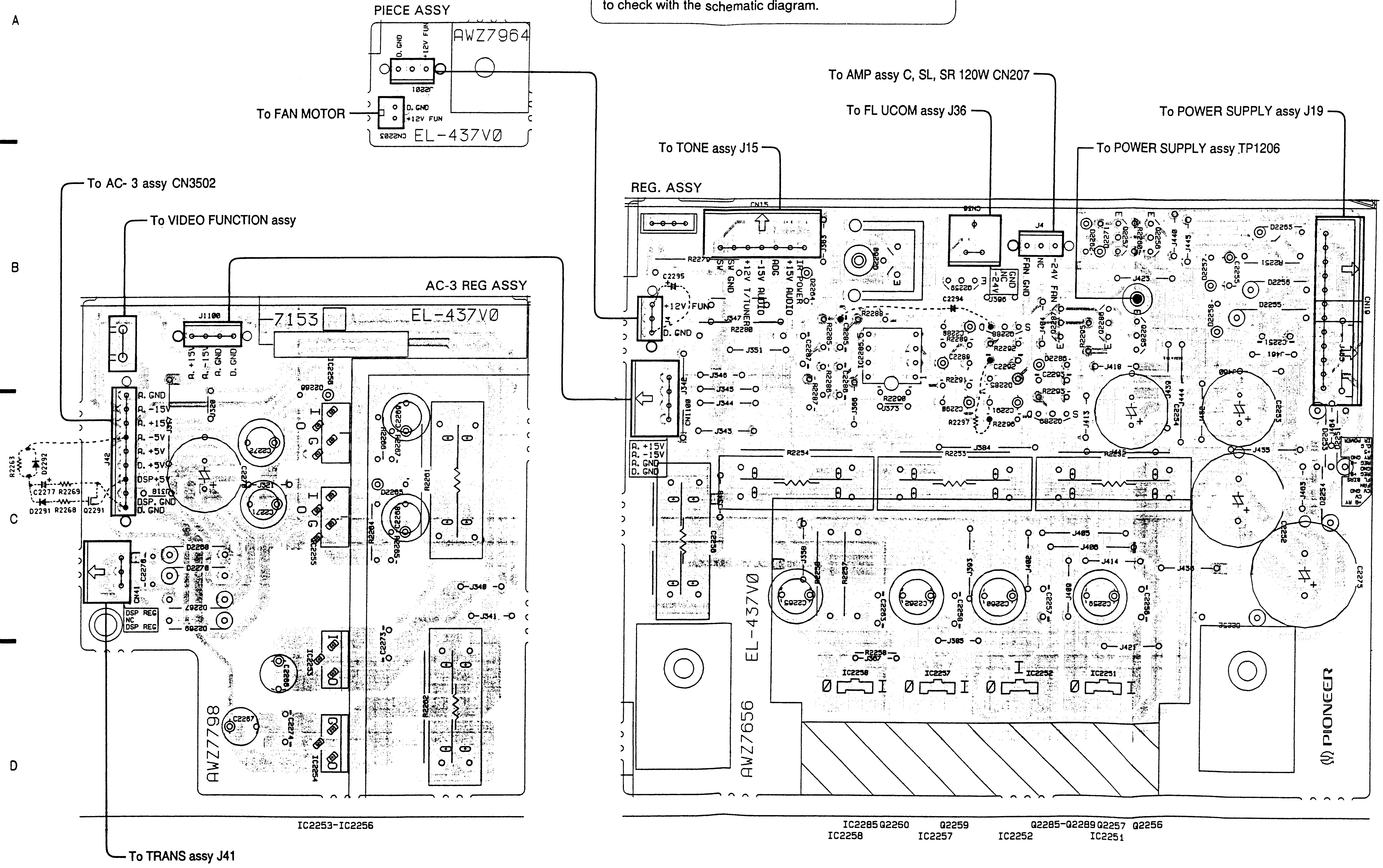
3.10 REG. ASSY, AC-3 REG ASSY AND PIECE ASSY



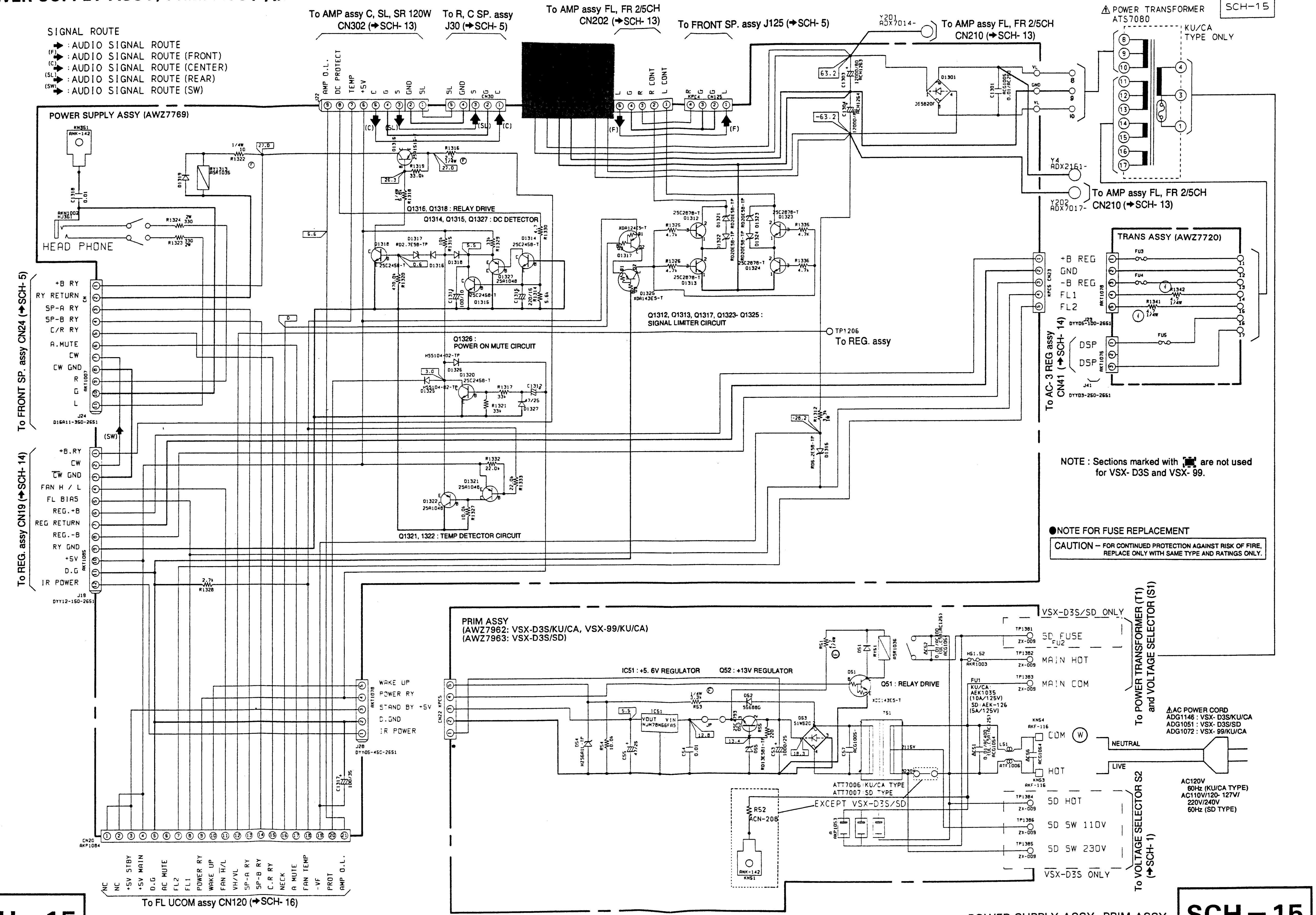
To TONE assy J15 (➔SCH- 6)
IR POWER
+15V AUDIO
A.D.G
-15V AUDIO
+12V VIDEO/TUNER
GND
SW
CN15
KPC7
(SW)
To POWER SUPPLY assy J19 (➔SCH- 15)
+BRY
CW
G
FAN L/F
FL BIAS
REG.+B
REG RETURN
REG.-B
RY GND
5V
D.G
IR POWER
KPD12
CN19
IC2251 NJM78M15FA5
IC2252 NJM79M15FA
IC2257 NJM7812FA5
IC2258 NJM78M05FA5
23.3
26.3
15.0
-14.7
-23.2
21.5
26.8
-27.3
5.52
23.4
R2297 220k
C2294 4.7/50 NP
C2275 3300/35
C2252 2200/35
C2253 1000/35
C2254 1000/35
C2251 0.01/AC250
D2251 S5688G
D2252 S5688G
D2253 S5688G
D2254 S5688G
D2255 S5688G
D2256 S5688G
D2263
D2264
R2280 82 2W
REG. ASSY (AWZ7656)
To POWER SUPPLY assy TP1206 (➔SCH- 15)
+12V FAN
D.GND
+15V
-15V
A.G
D.G
AKC4
CN1100
C2295 100/25
IC2286 XRA4558-P
IC2285 XRA4558-P
Q2288 2SK373
Q2289 2SK373
0
-14.6
14.9
-14.7
-14.7
-13.1
-14.4
Q2285 XDA124ES-T
Q2286 XDC124ES-T
Q2287 XDA124ES-T
J201 ADX7005-
filter on/off
DYY03-200-2651
J4
FAN GND
-24V FAN
AKI1076
To AMP assy C, SL, SR 120W CN207 (➔SCH- 13)
CN36 KPE3
-24V
GND
To FL UCOM assy J36 (➔SCH- 16)
-20
4.63
-14.2
4.59
-14.2
Q2259 2SC2458-T
Q2260 2SC4793
Q2257 XDC124ES-T
Q2266 XDA124ES-T
R2251 1/4W
C2255 47/25
D2257 RD11ESB2-TP
D2258 RD11ESB2-TP
D2271 RD13ESB2
D2262 RD13ESB2
Q2291 2SK373
R2268 1M
D2291 1SS252
R2269 1k
C2277 1/50
D2292 1SS252
R2263 1M
IC2253 NJM78M05FA5
IC2254 NJM79M05FA
R2261 39 5W
R2262 27 5W
15.0
-14.7
5.07
-5.0
DYY04-125-2651
J1100
+15V
-15V
A.G
D.G
AKI1077
To VIDEO FUNCTION assy (➔SCH- 4)
2203
AKC1041-
To AC- 3 assy (4/5) CN3502 (➔SCH- 10)
A.GND
A.-15V
A.+15V
A.-5V
A.+5V
D.5V
DSP 5V
DSP.G
D.GND
J42
DI6A09-250-2651
AKI1082
4.99
IC2255 PQ20RV1E
IC2256 PQ20RV1E
D2265 1SS252-TP
D2266 1SS252-TP
5.03
10.9
C2270 4700/16
D2267 S5688G
D2268 S5688G
D2269 S5688G
D2270 S5688G
DSP
DSP
CN41 KPC3
To TRANS assy J41 (➔SCH- 15)
AC-3 REG ASSY (AWZ7798)
PIECE ASSY (AWZ7964)
To FAN MOTOR
+12V FAN
D.GND
KM200SA2 CN2203
DYY03-300-2651
J2201
+12V FAN
D.GND
AKI1076

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

- This diagram is viewed from the mounted parts side.


A
B
C
D
PIECE ASSY
AWZ7964
D. GND
+12V FUN
CN2201
To FAN MOTOR
D. GND
+12V FUN
CN2205
EL-437V0
To AC- 3 assy CN3502
To VIDEO FUNCTION assy
AC-3 REG ASSY
J1100
7153
EL-437V0
A. +15V
A. -15V
A. GND
D. GND
A. GND
A. -15V
A. +15V
A. -5V
A. +5V
D. +5V
DSP+5V
DSP. GND
D. GND
J42
CN41
DSP REG
NC
DSP REG
AWZ7798
IC2253
IC2254
IC2255
IC2256
R2201
R2202
R2204
R2206
R2263
D2292
C2277
R2269
D2291
R2268
Q2291
IC2253-IC2256
To TRANS assy J41
REG. ASSY
To TONE assy J15
CN15
To FL UCOM assy J36
CN36
To AMP assy C, SL, SR 120W CN207
J4
To POWER SUPPLY assy TP1206
To POWER SUPPLY assy J19
CN19
+12V FUN
D. GND
5V
SW GND
+12V T/UNER
-15V AUDIO
ADG
IR-POWER
+15V AUDIO
GND
NC
-24V
FAN GND
-24V
FAN
CN1100
A. +15V
A. -15V
A. GND
D. GND
R2254
R2253
R2252
EL-437V0
AWZ7656
IC2258
IC2257
IC2252
IC2251
PIONEER
IC2285 Q2260 Q2259 Q2285-Q2289 Q2257 Q2256
IC2258 IC2257 IC2252 IC2251

3.11 POWER SUPPLY ASSY, PRIM ASSY AND TRANS ASSY


SCH-15
SIGNAL ROUTE
➔ : AUDIO SIGNAL ROUTE
(F) ➔ : AUDIO SIGNAL ROUTE (FRONT)
(C) ➔ : AUDIO SIGNAL ROUTE (CENTER)
(SL) ➔ : AUDIO SIGNAL ROUTE (REAR)
(SW) ➔ : AUDIO SIGNAL ROUTE (SW)
To AMP assy C, SL, SR 120W CN302 (➔SCH- 13)
To R, C SP. assy J30 (➔SCH- 5)
To AMP assy FL, FR 2/5CH CN202 (➔SCH- 13)
To FRONT SP. assy J125 (➔SCH- 5)
To AMP assy FL, FR 2/5CH CN210 (➔SCH- 13)
⚠ POWER TRANSFORMER ATS7080
KU/CA TYPE ONLY
POWER SUPPLY ASSY (AWZ7769)
AMP O.L.
DC PROTECT
TEMP
+5V
GND
HEAD PHONE
Q1316, Q1318 : RELAY DRIVE
Q1314, Q1315, Q1327 : DC DETECTOR
Q1312, Q1313, Q1317, Q1323- Q1325 : SIGNAL LIMITER CIRCUIT
Q1326 : POWER ON MUTE CIRCUIT
Q1321, 1322 : TEMP DETECTOR CIRCUIT
TP1206
To REG. assy
To FRONT SP. assy CN24 (➔SCH- 5)
+B RY
RY RETURN
SP-A RY
SP-B RY
C/R RY
A.MUTE
CW
CW GND
R
G
L
To REG. assy CN19 (➔SCH- 14)
+B.RY
CW
CW GND
FAN H / L
FL BIAS
REG.+B
REG RETURN
REG.-B
RY GND
+5V
D.G
IR POWER
TRANS ASSY (AWZ7720)
+B REG
GND
-B REG
FL1
FL2
DSP
DSP
To AC-3 REG assy CN41 (➔SCH- 14)
To AMP assy FL, FR 2/5CH CN210 (➔SCH- 13)
WAKE UP
POWER RY
STAND BY +5V
D.GND
IR POWER
PRIM ASSY
(AWZ7962: VSX-D3S/KU/CA, VSX-99/KU/CA)
(AWZ7963: VSX-D3S/SD)
IC51 : +5. 6V REGULATOR
Q52 : +13V REGULATOR
Q51 : RELAY DRIVE
VSX-D3S/SD ONLY
SD FUSE
MAIN HOT
MAIN COM
COM
HOT
SD HOT
SD SW 110V
SD SW 230V
VSX-D3S ONLY
EXCEPT VSX-D3S/SD
ATT7006 KU/CA TYPE
ATT7007 SD TYPE
To POWER TRANSFORMER (T1) and VOLTAGE SELECTOR (S1)
To VOLTAGE SELECTOR S2 (➔SCH- 1)
NEUTRAL
LIVE
⚠AC POWER CORD
ADG1146 : VSX- D3S/KU/CA
ADG1051 : VSX- D3S/SD
ADG1072 : VSX- 99/KU/CA
AC120V 60Hz (KU/CA TYPE)
AC110V/120- 127V/ 220V/240V 60Hz (SD TYPE)
NC
NC
+5V STBY
+5V MAIN
D.G
AC MUTE
FL2
FL1
POWER RY
WAKE UP
FAN H/L
VH/VL
SP-A RY
SP-B RY
C.R RY
NECK
A MUTE
FAN TEMP
-VF
PROT
AMP O.L.
To FL UCOM assy CN120 (➔SCH- 16)

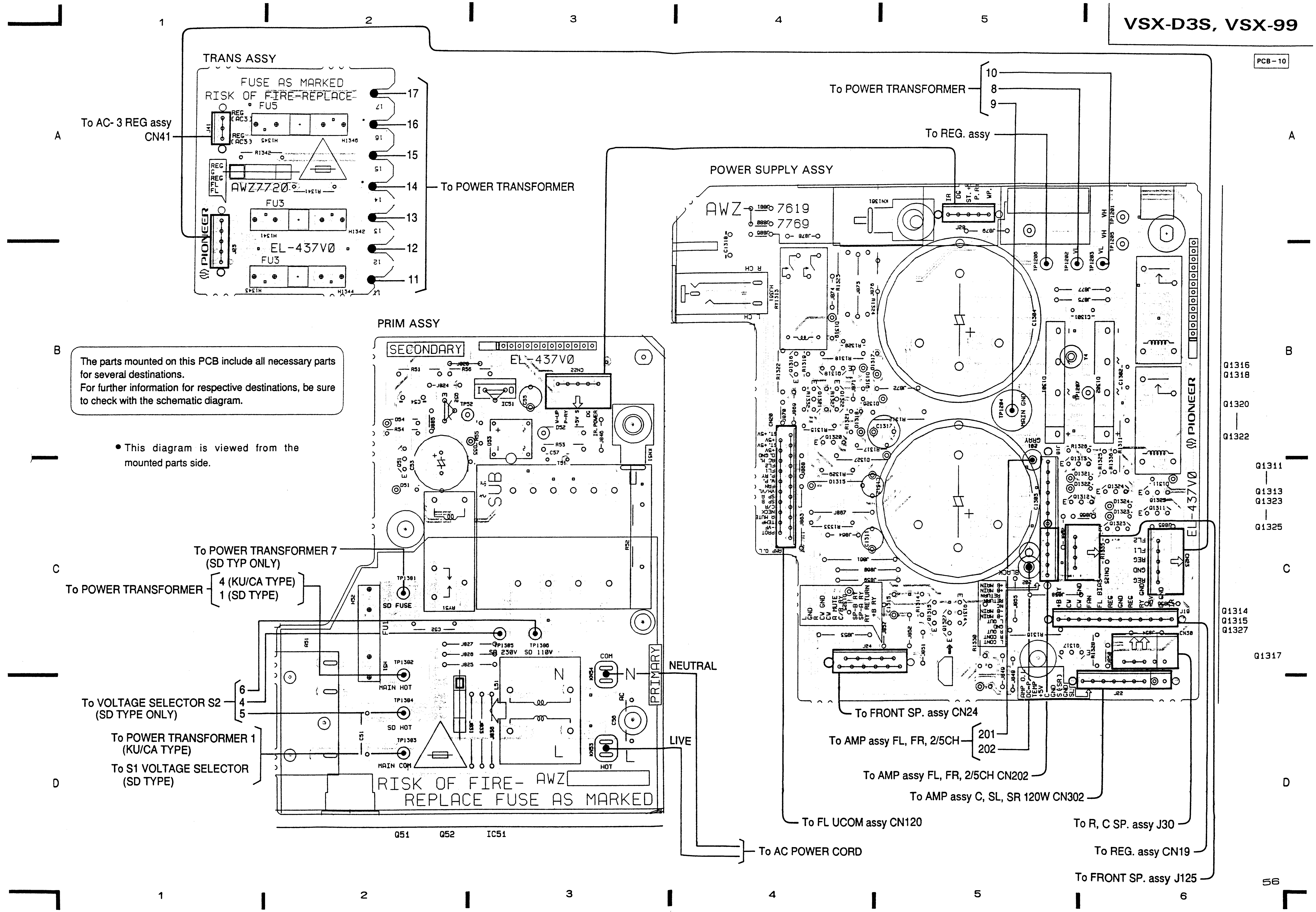
NOTE : Sections marked with ■ are not used for VSX- D3S and VSX- 99.

●NOTE FOR FUSE REPLACEMENT

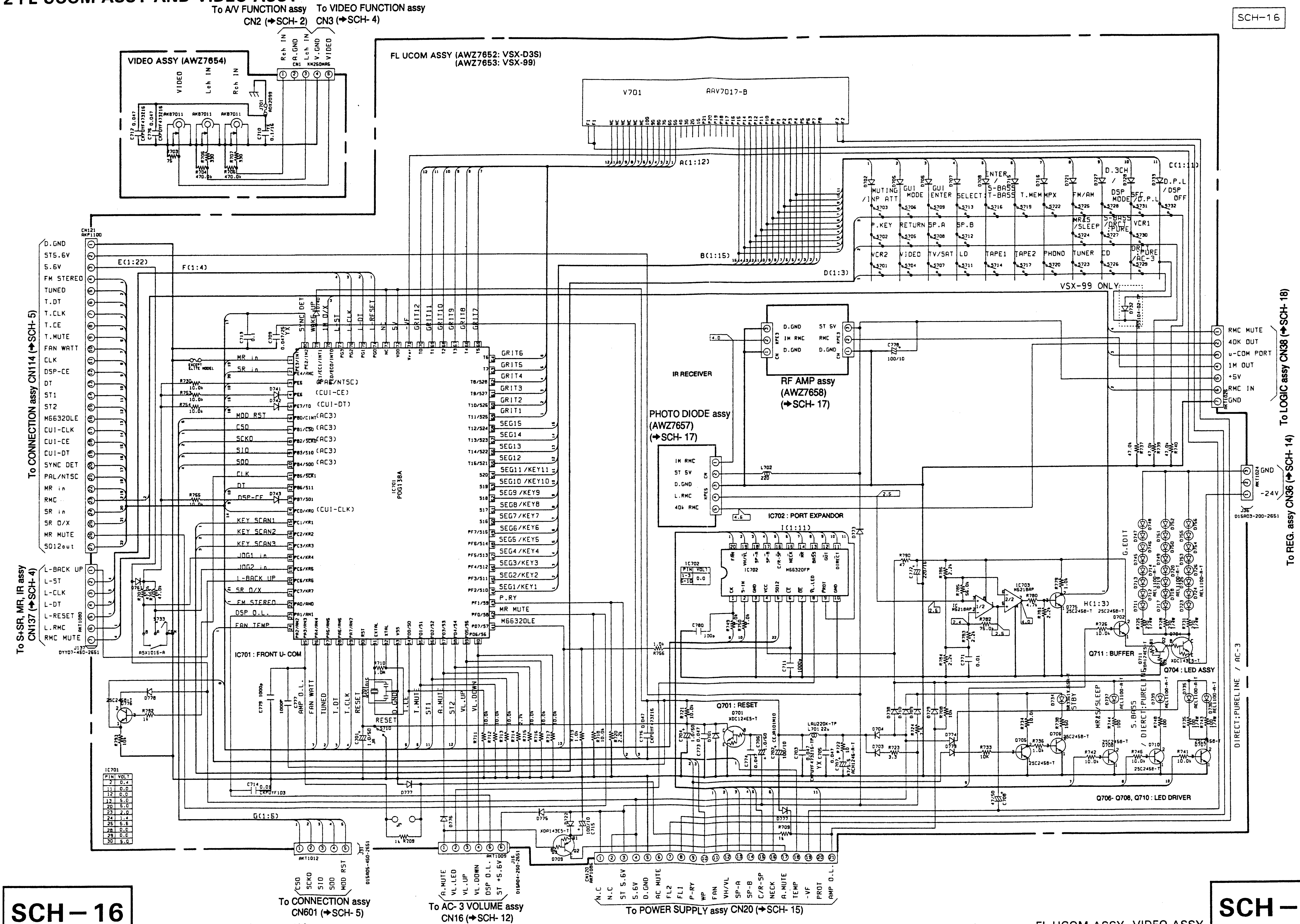
CAUTION – FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

- This diagram is viewed from the mounted parts side.


1
2
3
4
5
6
A
B
C
D
TRANS ASSY
FUSE AS MARKED
RISK OF FIRE-REPLACE
FU5
FU3
AWZ7720
EL-437V0
PIONEER
To AC- 3 REG assy CN41
17
16
15
14
13
12
11
To POWER TRANSFORMER
PRIM ASSY
SECONDARY
EL-437V0
SUB
To POWER TRANSFORMER 7 (SD TYP ONLY)
To POWER TRANSFORMER
4 (KU/CA TYPE)
1 (SD TYPE)
SD FUSE
TP1381
TP1385 SD 230V
TP1386 SD 110V
TP1382 MAIN HOT
TP1384 SD HOT
TP1383 MAIN COM
To VOLTAGE SELECTOR S2 (SD TYPE ONLY)
6
4
5
To POWER TRANSFORMER 1 (KU/CA TYPE)
To S1 VOLTAGE SELECTOR (SD TYPE)
COM
N
L
HOT
AC
PRIMARY
NEUTRAL
LIVE
RISK OF FIRE- AWZ
REPLACE FUSE AS MARKED
Q51
Q52
IC51
To AC POWER CORD
POWER SUPPLY ASSY
AWZ 7619
7769
To POWER TRANSFORMER
10
8
9
To REG. assy
MAIN GND
GRAY
BLACK
PIONEER
EL-437V0
Q1316
Q1318
Q1320
Q1322
Q1311
Q1313
Q1323
Q1325
Q1314
Q1315
Q1327
Q1317
To FRONT SP. assy CN24
To AMP assy FL, FR, 2/5CH
201
202
To AMP assy FL, FR, 2/5CH CN202
To AMP assy C, SL, SR 120W CN302
To FL UCOM assy CN120
To R, C SP. assy J30
To REG. assy CN19
To FRONT SP. assy J125

3.12 FL UCOM ASSY AND VIDEO ASSY


1
2
3
4
5
6
A
B
C
D
SCH-16
To A/V FUNCTION assy CN2 (→SCH- 2)
To VIDEO FUNCTION assy CN3 (→SCH- 4)
Rch IN
A.GND
Lch IN
V.GND
VIDEO
CN1 KN260MA6
VIDEO ASSY (AWZ7654)
VIDEO
Lch IN
Rch IN
AKB7011
AKB7011
AKB7011
FL UCOM ASSY (AWZ7652: VSX-D3S)
(AWZ7653: VSX-99)
V701
AAV7017-B
A(1:12)
B(1:15)
C(1:11)
D(1:3)
E(1:22)
F(1:4)
G(1:5)
H(1:3)
I(1:11)
MUTING /INP ATT
GUI MODE
GUI ENTER
SELECT
ENTER / 5-BASS T-BASS
T.MEM
MPX
FM/AM
D.3CH / DSP MODE
SFC D.P.L
D.P.L /DSP OFF
P.KEY
RETURN
SP.A
SP.B
MR&S /SLEEP
5-BASS /DRCT /PURE
VCR1
VCR2
VIDEO
TV/SAT
LD
TAPE1
TAPE2
PHONO
TUNER
CD
DRCT /PURE /AC-3
VSX-99 ONLY
CN121 AKP1100
D.GND
ST5.6V
5.6V
FM STEREO
TUNED
T.DT
T.CLK
T.CE
T.MUTE
FAN WATT
CLK
DSP-CE
DT
ST1
ST2
M66320LE
CUI-CLK
CUI-CE
CUI-DT
SYNC DET
PAL/NTSC
MR in
RMC
SR in
SR O/X
MR MUTE
5012out
To CONNECTION assy CN114 (→SCH- 5)
L-BACK UP
L-ST
L-CLK
L-DT
L-RESET
L.RMC
RMC MUTE
J137 DYY07-450-2651
To S+SR, MR, IR assy CN137 (→SCH- 4)
S733
ASX1016-A
SYNC DET
WAKE UP
SR O/X
L.ST
L.CLK
L.DT
L.RESET
NC
5V
-VF
GRIT12
GRIT11
GRIT10
GRIT9
GRIT8
GRIT7
GRIT6
GRIT5
GRIT4
GRIT3
GRIT2
GRIT1
SEG15
SEG14
SEG13
SEG12
SEG11 /KEY11
SEG10 /KEY10
SEG9 /KEY9
SEG8 /KEY8
SEG7 /KEY7
SEG6 /KEY6
SEG5 /KEY5
SEG4 /KEY4
SEG3 /KEY3
SEG2 /KEY2
SEG1 /KEY1
P.RY
MR MUTE
M66320LE
MR in
SR in
(PAL/NTSC)
(CUI-CE)
(CUI-DT)
MOD RST
CS0
SCK0
SI0
SO0
CLK
DT
DSP-CE
(AC3)
(CUI-CLK)
KEY SCAN1
KEY SCAN2
KEY SCAN3
JOG1 in
JOG2 in
L-BACK UP
SR O/X
FM STEREO
DSP O.L.
FAN TEMP
IC701 PDG138A
IC701 : FRONT U- COM
AMP O.L.
FAN WATT
TUNED
T.DT
T.CLK
RESET
T.CE
T.MUTE
ST1
ST2
VL.UP
VL.DOWN
IR RECEIVER
RF AMP assy (AWZ7658) (→SCH- 17)
D.GND
IR RMC
D.GND
ST 5V
RMC
D.GND
PHOTO DIODE assy (AWZ7657) (→SCH- 17)
IR RMC
ST 5V
D.GND
L.RMC
40k RMC
IC702 : PORT EXPANDOR
IC702 M66320FP
IC703 M5218AP
Q701 : RESET
Q711 : BUFFER
Q704 : LED ASSY
Q706- Q708, Q710 : LED DRIVER
G.EDIT
STBY
MR&S/SLEEP
5.BASS / DIERCT:PURELINE
DIRECT:PURELINE / AC-3
RMC MUTE
40K OUT
u-COM PORT
1M OUT
+5V
RMC IN
GND
To LOGIC assy CN38 (→SCH- 18)
GND
-24V
J36 01SA03-200-2651
To REG. assy CN36 (→SCH- 14)
AKT1012
CS0
SCK0
SI0
SO0
MOD RST
J31 01SA05-460-2651
To CONNECTION assy CN601 (→SCH- 5)
AKT1009
A.MUTE
VL.LED
VL.UP
VL.DOWN
DSP O.L.
ST +5.6V
J16 01SA06-250-2651
To AC- 3 VOLUME assy CN16 (→SCH- 12)
CN120 AKP1085
N.C
N.C
ST 5.6V
5.6V
D.GND
AC MUTE
FL2
FL1
P-RY
WP
FAN
VH/VL
SP-A
SP-B
C/R-SP
NECK
A.MUTE
TEMP
-VF
PROT
AMP O.L.
To POWER SUPPLY assy CN20 (→SCH- 15)

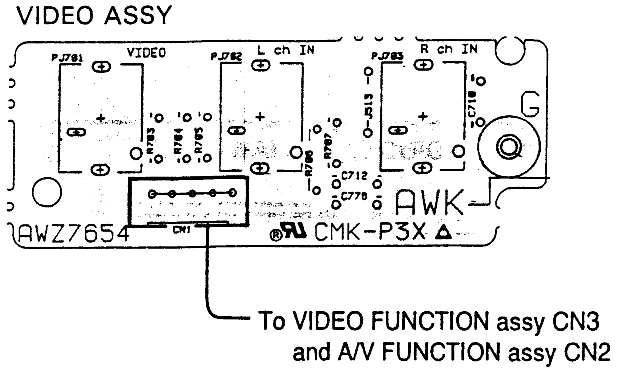
IC701

PIN	VOLT
2	0.4
11	0.0
12	0.0
13	5.0
20	5.0
23	2.0
24	1.4
25	5.6
28	0.0
29	0.0
30	5.0

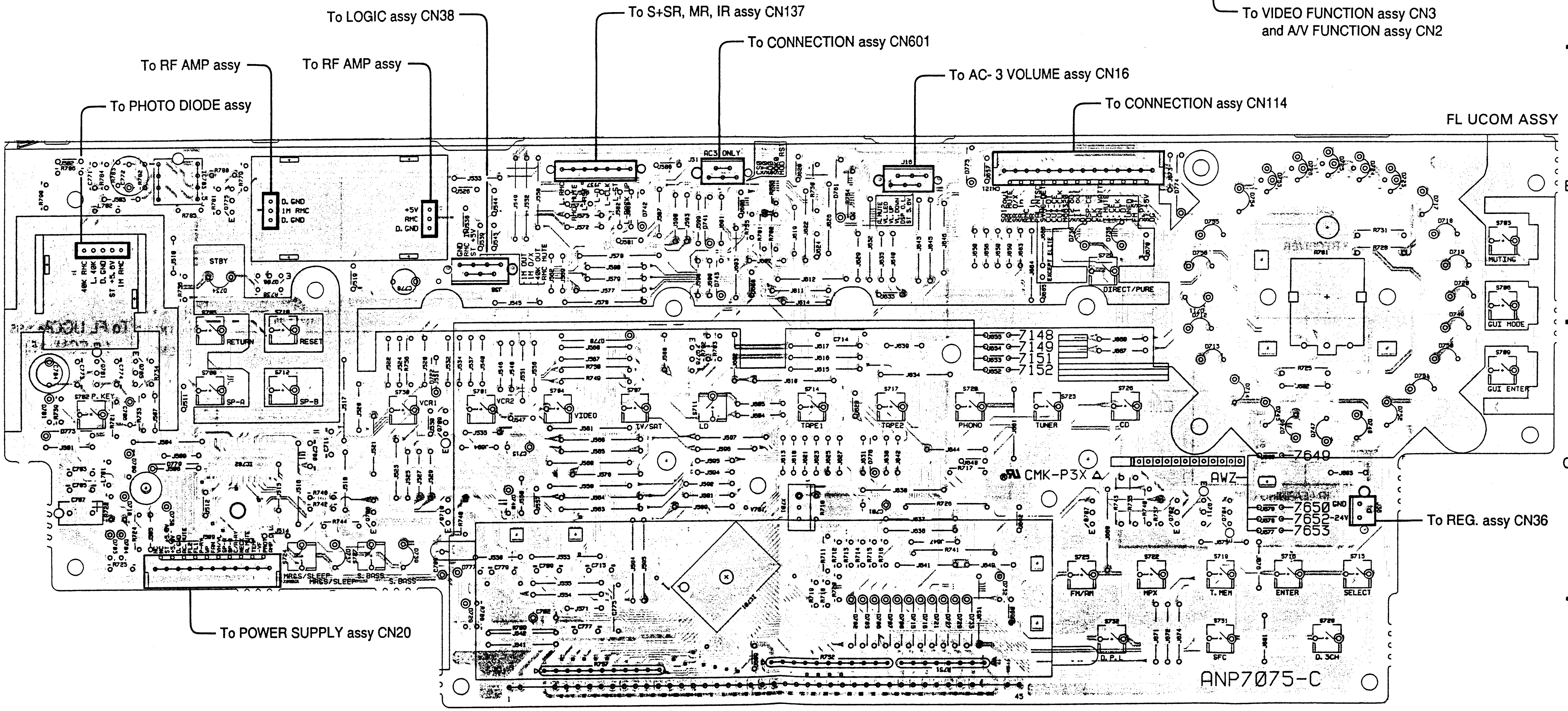
The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

- This diagram is viewed from the mounted parts side.

VIDEO ASSY


PJ781
VIDEO
PJ782
L ch IN
PJ783
R ch IN
AWK
AWZ7654
CN1
CMK-P3X
To VIDEO FUNCTION assy CN3
and A/V FUNCTION assy CN2

FL UCOM ASSY


To LOGIC assy CN38
To S+SR, MR, IR assy CN137
To CONNECTION assy CN601
To AC- 3 VOLUME assy CN16
To CONNECTION assy CN114
To RF AMP assy
To RF AMP assy
To PHOTO DIODE assy
D. GND
IM RMC
D. GND
+5V
RMC
D. GND
AC3 ONLY
STBY
RETURN
RESET
SP-A
SP-B
P.KEY
VCR1
VCR2
VIDEO
TV/SAT
LD
TAPE1
TAPE2
PHONO
TUNER
CD
DIRECT/PURE
MUTING
GUI MODE
GUI ENTER
CMK-P3X
AWZ
To REG. assy CN36
FM/AM
MPX
T. MEM
ENTER
SELECT
D.P.L
SFC
D. 3CH
MRES/SLEEP
S.BASS
ANP7075-C
To POWER SUPPLY assy CN20

Q701 Q705 IC703 Q775 Q706 IC702 Q708 Q709 Q710 Q776 IC701 Q707 Q702 Q711 Q704

3.13 PHOTO DIODE ASSY AND RF AMP ASSY

SCH−17

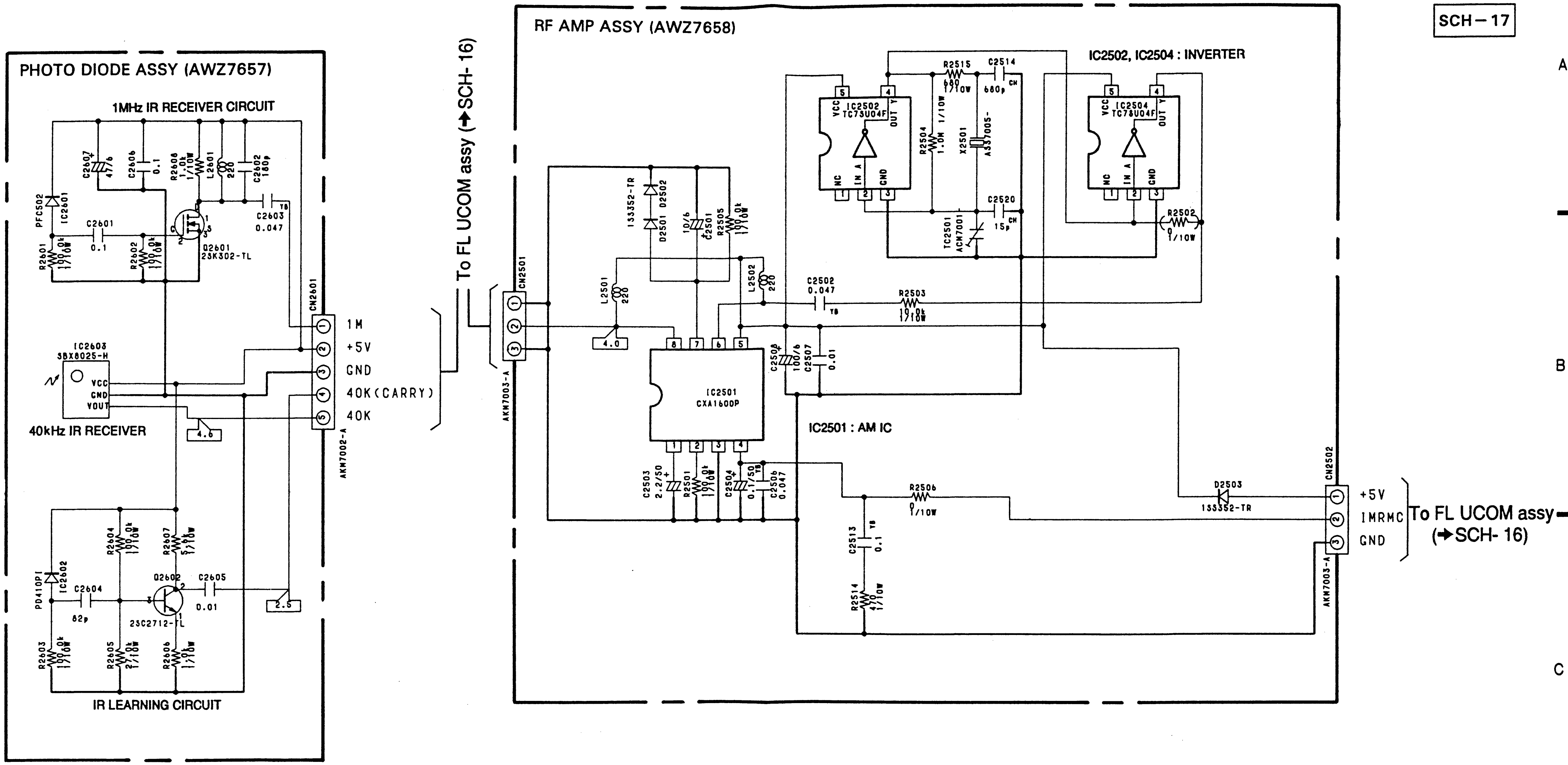
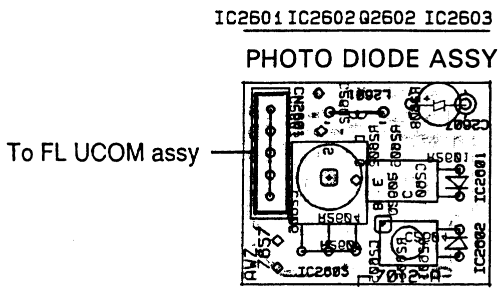
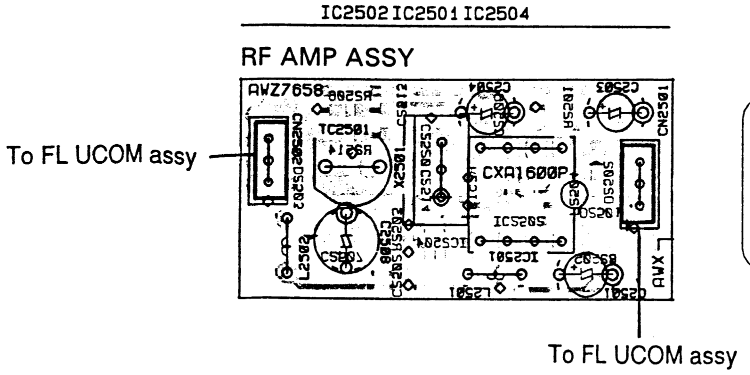


PHOTO DIODE ASSY (AWZ7657)
1MHz IR RECEIVER CIRCUIT
C2607 47/6
C2606 0.1
R2608 1.0k 1/10W
L2601 220
C2602 180p
PFC502
IC2601
C2601 0.1
R2601 100k 1/10W
R2602 10k 1/10W
Q2601 2SK302-TL
C2603 0.047
CN2601
1M
+5V
GND
40K (CARRY)
40K
AKM7002-A
IC2603 SBX8025-H
VCC
GND
VOUT
40kHz IR RECEIVER
4.6
To FL UCOM assy (→SCH-16)
R2604 100k 1/10W
R2607 5.1k 1/10W
PD410PI
IC2602
C2604 82p
Q2602 2SC2712-YL
C2605 0.01
2.5
R2603 100k 1/10W
R2605 22k 1/10W
R2606 10k 1/10W
IR LEARNING CIRCUIT
RF AMP ASSY (AWZ7658)
CN2501
AKM7003-A
IC2502, IC2504 : INVERTER
R2515 680 1/10W
C2514 680p
IC2502 TC7SU04F
VCC
OUT Y
NC
IN A
GND
R2504 1.0M 1/10W
X2501 A33T005-
C2520 15p
TC2501 ACM7001-
IC2504 TC7SU04F
R2502 0 1/10W
1SS352-TR
D2501 D2502
C2501 10/6
R2505 10k 1/10W
L2501 220
L2502 220
4.0
C2502 0.047
R2503 10k 1/10W
C2508 100/6
C2507 0.01
IC2501 CXA1600P
IC2501 : AM IC
C2503 2.2/50
R2501 100k 1/10W
C2504 0.1/50
C2506 0.047
R2506 0 1/10W
C2513 0.1
R2514 470 1/10W
D2503 1SS352-TR
CN2502
AKM7003-A
+5V
IMRMC
GND
To FL UCOM assy (→SCH-16)


IC2601 IC2602 Q2602 IC2603
PHOTO DIODE ASSY
To FL UCOM assy
CN2601
AWZ7657
IC2603
IC2601
IC2602

PCB−12

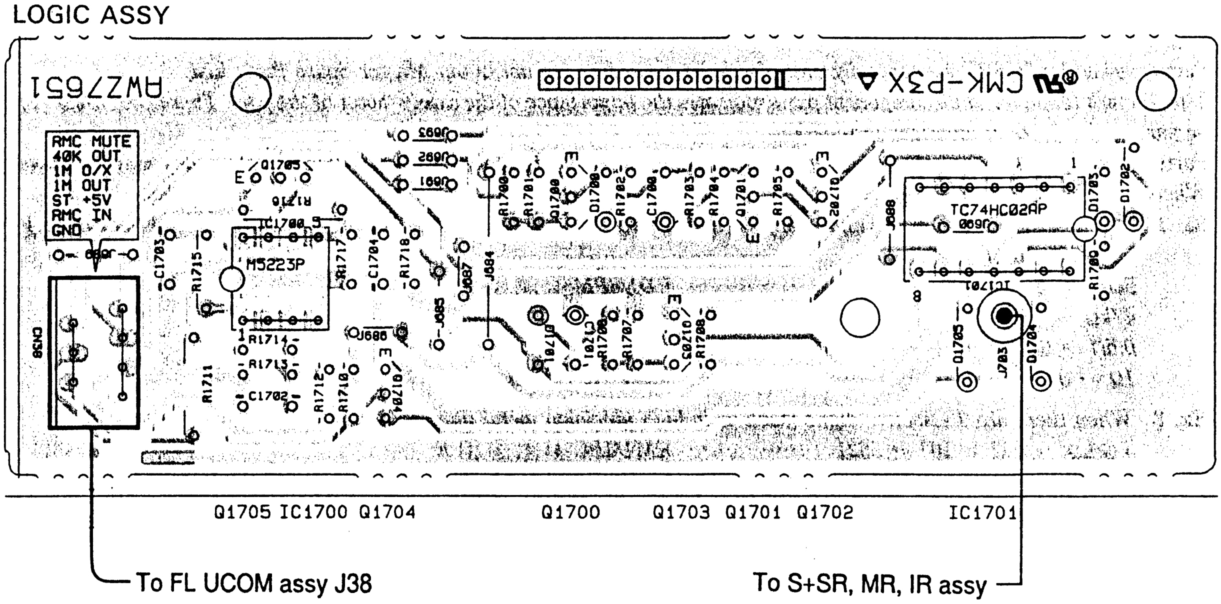

IC2502 IC2501 IC2504
RF AMP ASSY
AWZ7658
To FL UCOM assy
CXA1600P
TC2501
X2501
IC2502
IC2504
IC2501
CN2501
CN2502
L2501
L2502
To FL UCOM assy

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

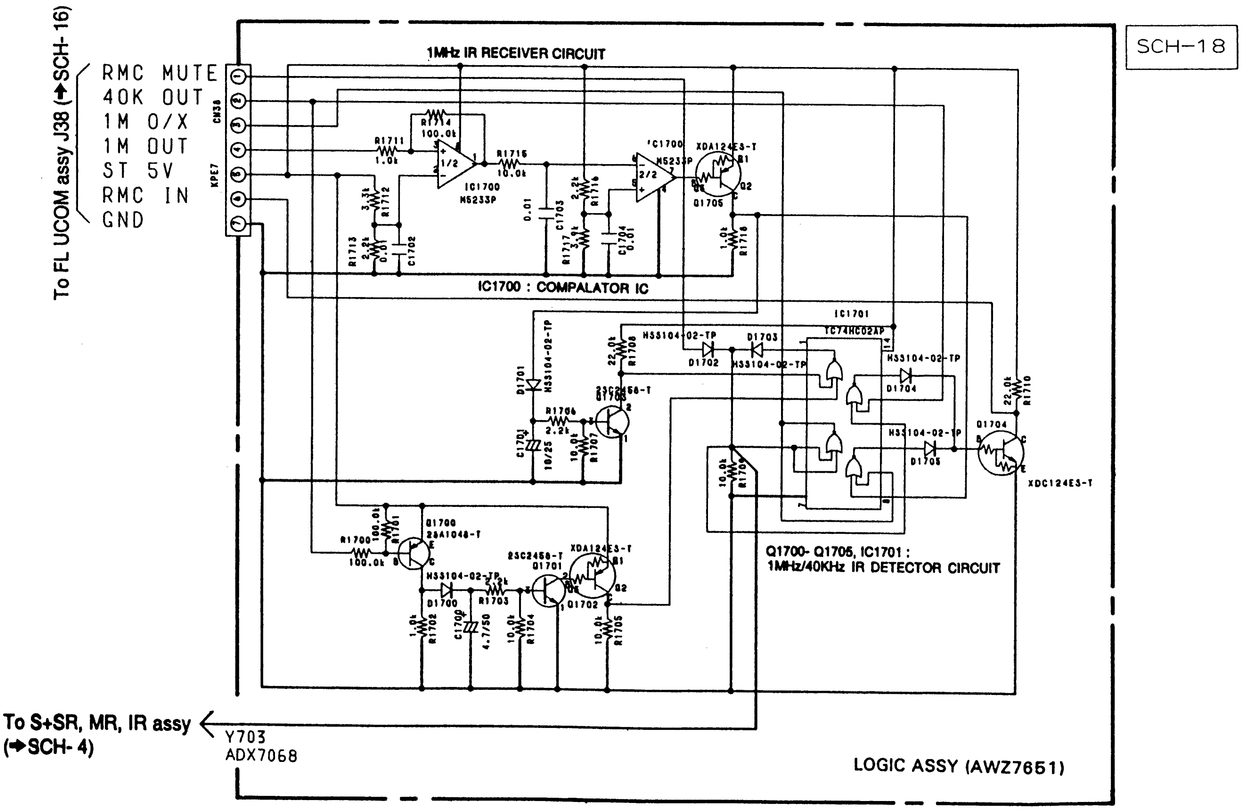
- This diagram is viewed from the mounted parts side.

3.14 LOGIC ASSY

- This diagram is viewed from the mounted parts side.


LOGIC ASSY
AWZ7651
CMK-P3X
RMC MUTE
40K OUT
1M O/X
1M OUT
ST +5V
RMC IN
GND
CN38
M5223P
TC74HC02AP
J703
Q1705 IC1700 Q1704
Q1700
Q1703 Q1701 Q1702
IC1701
To FL UCOM assy J38
To S+SR, MR, IR assy

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.


To FL UCOM assy J38 (➔SCH-16)
RMC MUTE
40K OUT
1M O/X
1M OUT
ST 5V
RMC IN
GND
CN38
KPE7
1MHz IR RECEIVER CIRCUIT
R1714 100.0k
R1711 1.0k
R1712 3.3k
R1713 2.2k
C1702 0.01
IC1700 M5233P
R1715 10.0k
C1703 0.01
R1716 2.2k
R1717 3.3k
C1704 0.01
IC1700 M5233P
XDA124E3-T
Q1705
R1718 1.0k
IC1700 : COMPALATOR IC
IC1701 TC74HC02AP
H33104-02-TP
D1701
D1702
D1703
D1704
D1705
R1708 22.0k
2SC2458-T
Q1703
R1706 2.2k
C1701 10/25
R1707 10.0k
R1710 22.0k
Q1704
XDC124E3-T
R1709 10.0k
Q1700 2SA1048-T
R1700 100.0k
R1701 100.0k
D1700
R1703 2.2k
2SC2458-T Q1701
XDA124E3-T Q1702
R1702 1.0k
C1700 4.7/50
R1704
R1705 10.0k
Q1700- Q1705, IC1701 : 1MHz/40KHz IR DETECTOR CIRCUIT
To S+SR, MR, IR assy (➔SCH-4)
Y703
ADX7068
LOGIC ASSY (AWZ7651)

LOGIC ASSY **SCH-18**

4. PCB PARTS LIST

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 × 10^1 → 561 ························ RD1/8PM [5] [6] [1] J
47kΩ → 47 × 10^3 → 473 ························ RD1/4PS [4] [7] [3] J
0.5Ω → 0R5 ·· RN2H [0] [R] [5] K
1Ω → 010 ·· RS1P [0] [1] [0] K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 × 10^1 → 5621 ················· RM1/4PC [5] [6] [2] [1] F

LIST OF ASSEMBLIES

Mark	No.	Description	Parts No.
NSP		TUNER ASSY	AWE1140
NSP		PS & AMP ASSY	AWK7141
		├─ POWER SUPPLY ASSY	AWZ7769
		├─ PRIM ASSY	AWZ7962
NSP		├─ FRONT SP. ASSY	AWZ7625
NSP		├─ R.C SP. ASSY	AWZ7628
		└─ CONNECTION ASSY	AWZ7633
NSP		SMALL SIGNAL ASSY	AWK7146
		├─ AUDIO FUNCTION ASSY	AWZ7796
		├─ A/V FUNCTION ASSY	AWZ7636
		├─ VIDEO FUNCTION ASSY	AWZ7640
		├─ TONE ASSY	AWZ7644
		└─ S+SR, MR, IR ASSY	AWZ7647
NSP		FRONT ASSY	AWK7151
		├─ FL UCOM ASSY	AWZ7652
		├─ LOGIC ASSY	AWZ7651
NSP		├─ VIDEO ASSY	AWZ7654
		└─ IR RECEIVER ASSY	AWX7012
		├─PHOTO DIODE ASSY	AWZ7657
		└─RF AMP ASSY	AWZ7658
		POWER AMP ASSY 5CH	AWK7176
		├─ AMP ASSY C, SL, SR120W	AWZ7582
		└─ AMP ASSY FL, FR 2/5CH	AWZ7583
NSP		COMPLEX ASSY	AWK7153
		├─ AC-3 VOLUME ASSY	AWZ7655
		├─ REG ASSY	AWZ7656
		├─ JOINT ASSY	AWZ7648
NSP		├─ TRANS ASSY	AWZ7720
		├─ AC-3 REG ASSY	AWZ7798
NSP		└─ PIECE ASSY	AWZ7964
		AC-3 ASSY	AWX7016

TUNER ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC451		AN7470P
	IC431		LA1265S
	IC471		LM7001
	Q454		2SA933S
	Q452, Q453		2SC1740S
	Q472		2SC1740SLN
	Q451		2SC2603
	Q403, Q421		2SC2668
	Q402		2SC2786
	Q405		2SK161
	Q401		2SK241
	Q471		2SK246
	Q473, Q474		RN2201
	D431–D435		1SS252
	D401–D403		1SV147

COILS AND FILTERS

Mark	No.	Description	Parts No.
	L401		ATC1001
	L402		ATC1002
	L405		ATC1003
	L403		ATC1004
	L404		ATC1005
	T402		ATE–063
	L431		ATE–079
	F421		ATF–107
	F422		ATF–119
	F431		ATF–208
	L406, L407		LAU2R2M

CAPACITORS

Mark	No.	Description	Parts No.
	C454	(470pF/50V)	ACE1039
	C466		CCCSL121J50
	C417		CCDCH010C50
	C406		CCDCH020C50
	C415		CCDCH080D50
	C413, C481, C482		CCDCH150J50
	C414		CCDCH330J50
	C401, C404, C405		CCDRH330J50
	C402		CCDRH390J50
	C416		CCDTH180J50
	C479		CCPUSL220J50
	C445		CCPUSL470J50
	C452		CEANP4R7M35
	C442		CEAS0R1M50
	C420, C437, C475		CEAS100M50
	C451		CEAS101M16
	C456		CEAS1R5M50
	C438		CEAS2R2M50
	C443, C455		CEAS3R3M50
	C458, C463, C464, C484		CEAS470M16
	C433, C461, C462		CEAS4R7M50
	C457		CEASR22M50
	C478		CFTXA224J50
	C477		CKCYF103Z50
	C439, C440		CKCYF223Z50
	C435		CKCYF472Z50
	C453		CKCYF473Z50
	C436		CKCYX683M25
	C400		CKDYF102Z50
	C409, C483		CKPUYB101K50
	C444		CKPUYB331K50
	C441, C472		CKPUYF223Z25
	C403, C410–C412, C418, C419		CKPUYY103N16
	C421, C422, C465, C471, C473		CKPUYY103N16
	C476, C480, C485		CKPUYY103N16
	C459, C460		CQMA102J50
	C468, C469		CQMA182J50
	C446, C447		CQMA561K50

RESISTORS

Mark	No.	Description	Parts No.
	VR451	(4.7kΩ)	ACP1042
	VR431	(10kΩ)	ACP1043
	VR432		VRTS6VS153
	Other Resistors		RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
		ANTENNA TERMINAL 4–P	AKA1014
	X471	CRYSTAL RESONATOR (7.2MHz)	ASS1005
	X431	CERAMIC FILTER (450kHz)	ATF–125
		AM RF TUNING BLOCK	AXX1011
	CN401	12P SOCKET	KP200IA12L

POWER SUPPLY ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	Q1321, Q1322, Q1327		2SA1048
	Q1316		2SA1515
	Q1314, Q1315, Q1318, Q1320		2SC2458
	Q1312, Q1313, Q1323, Q1324		2SC2878
	Q1317		XDA124ES
	Q1325		XDA143ES
	D1301		D5SB20F
	D1316, D1318, D1319, D1325–D1327		HSS104–02
	D1317		RD2.7ESB1
	D1321–D1324		RD20ESB
	D1315		RD6.2ESB

SWITCHES AND RELAYS

Mark	No.	Description	Parts No.
	RY1313		ASR1035

CAPACITORS

Mark	No.	Description	Parts No.
	C1301	(0.01μF/150V)	ACG1005
	C1303	(12000μF/80V)	ACH1263
	C1304	(12000μF/80V)	ACH1264
	C1311		CEAS101M10
	C1317		CEAS101M35
	C1315		CEAS221M16
	C1312		CEAS470M25
	C1318		CKCYF103Z50

RESISTORS

Mark	No.	Description	Parts No.
	R1322		RD1/4PMF100J
	R1316		RD1/4PMF2R2J
	R1318		RD1/4PMF682J
	R1330		RFA1/4PS4R7J
	R1312		RS1LMF332J
	R1323, R1324		RS2LMF331J
	Other Resistors		RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
	Y201	BOARDIN READ WIRE	ADX7014
	Y202	BOARDIN READ WIRE	ADX7017
		JACK	AKN1002
	CN20	21P SOCKET	AKP1084
		CABLE HOLDER	AKT1007
		CABLE HOLDER (9P)	AKT1082
		CABLE HOLDER (12P)	AKT1085
	CN125	CONNECTOR (4P)	KPC4
	CN23, CN30	CONNECTOR (5P)	KPC5

PRIM ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC51		NJM78M56FAS
	Q52		2SC4793
	Q51		XDC143ES
	D51		HSS104–02
	D54		HZS6A1L
	D55		RD13ESB1
	D53		S1WB20
	D52		S5688G

COILS AND FILTERS

Mark	No.	Description	Parts No.
	L51		ATF1006

TRANSFORMERS

Mark	No.	Description	Parts No.
	T51		ATT7006

SWITCHES AND RELAYS

Mark	No.	Description	Parts No.
	RY51		ASR1036

CAPACITORS

Mark	No.	Description	Parts No.
	C57	(0.01μF/150V)	ACG1005
	C51, C52, C56	(0.01μF/400V)	ACG1054
	C53		CEAS102M25
	C55		CEAS470M25
	C54		CKCYB103K50

RESISTORS

Mark	No.	Description	Parts No.
	R52	(2.2MΩ, 1/2W)	ACN–208
	R53		RD1/4PMF332J
	R51		RD1/4PMF4R7J
	Other Resistors		RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
		AC OUTLET 3P	AKP1053
	H51, H52	FUSE CLIP	AKR1003
	CN22	CONNECTOR (5P)	KPC5

FRONT SP. ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	Q1282, Q1283		XDC143ES
	D1282, D1283		HSS104–02

SWITCHES AND RELAYS

Mark	No.	Description	Parts No.
	S1281		AKX1033
	RY1282, RY1283		ASR1035

RESISTORS

Mark	No.	Description	Parts No.
	All Resistors		RD1/4PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
		SPEAKER TERMINAL 8–P	AKE1011
		CABLE HOLDER (4P)	AKT1077
	CN26	CONNECTOR (7P)	KPC7
	CN24	CONNECTOR (11P)	KPE11
	CN27	CONNECTOR (6P)	KPE6

R.C SP. ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	Q1291		2SC2878
	Q1271, Q1272		XDC143ES
	D1272, D1273		HSS104−02

SWITCHES AND RELAYS

Mark	No.	Description	Parts No.
	RY1272, RY1273		ASR1035

CAPACITORS

Mark	No.	Description	Parts No.
	C1293		CKPUYX222M16
	C1294		CEANP4R7M50

RESISTORS

Mark	No.	Description	Parts No.
	R1271, R1272		RD1/4PMF100J
	Other Resistors		RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
	CN8007	2P PIN JACK	AKB7008
		SPEAKER TERMINAL 4−P	AKE1055
		CABLE HOLDER (7P)	AKT1080

CONNECTION ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC623		LA7213
	Q622		2SA1515
	Q623		2SC2458
	Q624		2SC2878
	Q621		XDA143ES
	Q625		XDC143ES
	D624, D626, D627		HSS104−02
	D623, D625		RD5.1ESB2

CAPACITORS

Mark	No.	Description	Parts No.
	C638		CCCSL101J50
	C642		CEAS010M50
	C639		CEAS101M25
	C641		CEAS3R3M50
	C640		CEAS470M25

RESISTORS

Mark	No.	Description	Parts No.
	R639		RD1/2PM181J
	Other Resistors		RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
	CN114	SOCKET (27P)	AKP1099
		CABLE HOLDER	AKT1012
	CN53	10P PLUG	KM200IB10
	CN51	12P PLUG	KM200IB12
	CN52	13P PLUG	KM200IB13
	CN54	15P PLUG	KM200IB15
	CN56	16P PLUG	KM200IB16
	CN55, CN59	9P PLUG	KM200IB9
	CN601	CONNECTOR (5P)	KPE5

AUDIO FUNCTION ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC404		M5220P
	IC401		TC9164AN
	IC403		XRA4558−P

CAPACITORS

Mark	No.	Description	Parts No.
	C1402, C1403		CCSQCH101J50
	C447		CCSQCH102J50
	C419, C420		CCSQCH221J50
	C417, C418		CCSQCH681J50
	C423, C424		CCSQSL101J50
	C415, C416		CEAS100M50
	C421, C422, C431, C432		CEAS101M25
	C433, C434, C439, C440		CEAS2R2M50
	C445, C446		CEAS470M25
	C1401, C429, C430, C435, C436		CKSQYF103Z50
	C441, C444		CKSQYF103Z50
	C427, C428		CQMA242J50
	C425, C426		CQMA822J50

RESISTORS

Mark	No.	Description	Parts No.
	All Resistors		RS1/10S☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK (6P)	AKB7012
		PIN JACK (6P)	AKB7013
		CABLE HOLDER (11P)	AKT1084
	CN152	13P SOCKET	KP200IB13L

A/V FUNCTION ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC451		TC9163AN

CAPACITORS

Mark	No.	Description	Parts No.
	C494, C495		CCSQCH101J50
	C487		CCSQCH102J50
	C481, C482		CEAS470M25
	C475, C476, C483, C484, C491		CKSQYF103Z50

RESISTORS

Mark	No.	Description	Parts No.
	All Resistors		RS1/10S☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK (4P)	AKB7014
		PIN JACK (4P)	AKB7015
	CN2	PLUG 3−P	KM250MA3L
	CN153	10P SOCKET	KP200IB10L
	CN11	L−CONNECTOR (11P)	KPD11L

VIDEO FUNCTION ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC501		LA7951
	IC504		M66320FP
	IC505		MM1067XD
	IC502		NJM2233BLA
	IC508		NJM2243L
	IC506		PD6157B
	IC510		UPC78L05J
	Q503−Q506		2SA1115
	Q507		2SA1515
	Q501, Q502		2SC2458
	D501−D504		HSS104−02

COILS AND FILTERS

Mark	No.	Description	Parts No.
	L504		LAU220J
	L501, L502, L505−L508		LAU680J

CAPACITORS

Mark	No.	Description	Parts No.
	TC501 (9pF−90pF)		ACM−023
	C1507, C1508		CCSQCH050C50
	C1521		CCSQCH101J50
	C537, C541		CCSQCH150J50
	C529		CCSQCH221J50
	C542		CCSQCH330J50
	C501		CCSQCH331J50
	C519, C524, C528		CCSQCH561J50
	C525, C526, C538		CEAS010M50
	C1513, C1514, C520, C522, C535		CEAS100M50
	C534		CEAS101M10
	C513		CEAS101M25
	C1502−C1504, C502−C506		CEAS470M25
	C516−C518, C532, C540, C544		CEAS470M25
	C548, C550		CEAS470M25
	C1510−C1512		CEAS471M10
	C530		CEASR47M50
	C1515, C1516, C1519, C531		CKSQYB102K50
	C1517, C1518		CKSQYB104K25
	C527		CKSQYB332K50
	C1505, C1506, C514, C515, C521		CKSQYF103Z50
	C533, C536, C539, C546		CKSQYF103Z50
	C523		CKSQYF473Z50

RESISTORS

Mark	No.	Description	Parts No.
	R540, R541		RD1/2PM331J
	R532		RD1/4PM680J
	Other Resistors		RS1/10S☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
		PIN JACK (2P)	AKB7016
		2P RCA PIN JACK	AKB7017
		3P RCA PIN JACK	AKB7018
	X502	CRYSTAL RESONATOR (14.31818MHz)	ASS1056
	X501	CERAMIC RESONATOR (503kHz)	ASS1112
	CN3	PLUG 3−P	KM250MA3L
	CN154	15P SOCKET	KP200IB15L
	CN155	9P SOCKET	KP200IB9L

TONE ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC552		M5220P
	IC554		TC9162AN
	IC551		XRA4558N−P
	Q551−Q556		2SC2458
	D551, D552		HSS104−02
	D553		RD5.1ESB2

CAPACITORS

Mark	No.	Description	Parts No.
	C569, C570		CCSQCH101J50
	C584		CCSQCH221J50
	C603		CCSQCH471J50
	C553, C554		CEAS010M50
	C565, C566, C589, C591, C592		CEAS100M50
	C567, C568		CEAS221M16
	C587, C588		CEAS2R2M50
	C590		CEAS470M25
	C551, C552, C581, C582, C585		CEAS4R7M50
	C557, C558		CEASR47M50
	C555, C556		CFTXA154J50
	C559, C560		CFTXA473J50
	C602		CKCYF103Z50
	C563, C564		CKPUYB151K50
	C583		CKSQYB681K50
	C601		CKSQYF103Z50
	C561, C562		CQMA153J50

RESISTORS

Mark	No.	Description	Parts No.
	VR551, VR552 (30kΩ)		ACS1115
	VR553 (10kΩ)		ACS7003
	R579, R580, R598, R599		RD1/4PM221J
	R601, R614, R615		RS1/10S000J
	R602−R604		RS1/10S102J
	R593, R607, R608		RS1/10S103J
	R586		RS1/10S183J
	R583		RS1/10S222J
	R577		RS1/10S272J
	R591		RS1/10S331J
	R590		RS1/10S431J
	R550, R581, R582, R585, R588		RS1/10S473J
	R560, R584		RS1/10S512J
	Other Resistors		RD1/8PM☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
		CABLE HOLDER (7P)	AKT1080
	CN57, CN58	20P PLUG	KM200IB20
	CN13	CONNECTOR (14P)	KPE14

S+SR, MR, IR ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC651, IC652		LA7951
	IC658		LH5268AN1TLL
	IC657		PD5320B
	IC656		TC74HC123AF
	Q657		2SA1048
	Q652−Q654		2SA1115
	Q655, Q662, Q663		2SC2458
	Q665		2SC3732
	Q664		XDC124ES
	D666		1SS252
	D651−D653, D657, D658		HSS104−02
	D660−D665		HSS104−02
	D659		RD3.0ESB1

COILS AND FILTERS

Mark	No.	Description	Parts No.
	L659		LAU220K
	L653, L654, L656−L658		LAU820J

CAPACITORS

Mark	No.	Description	Parts No.
	C692 (0.047F)		ACH1246
	C681−C683		CCSQCH050C50
	C684, C686		CEAS010M50
	C655, C656, C665, C671		CEAS100M50
	C690		CEAS101M10
	C668, C669		CEAS101M25
	C698		CEAS1R5M50
	C1651, C663, C677−C679, C693		CEAS470M25
	C685, C687		CEAS471M10
	C699		CKDYF103Z50
	C688, C689, C696, C697		CKSQYB102K50
	C666, C667, C673−C675, C691		CKSQYF103Z50
	C659, C660, C664, C670		CKSQYF104Z50
	C694, C695		CKSQYF473Z50

RESISTORS

Mark	No.	Description	Parts No.
	R674		RD1/2PM221J
	R672, R673		RD1/2PM331J
	R657		RD1/8PM102J
	Other Resistors		RS1/10S☐☐☐J

OTHERS

Mark	No.	Description	Parts No.
	CN1001	JACK	AKN−209
	CN1002	JACK	AKN1028
	CN1005, CN1006	SOCKET	AKP1064
	X651	CERAMIC RESONATOR (4MHz)	ASS1025
		JACK	BKN1005
	CN156	16P SOCKET	KP200IB16L
	CN159	9P SOCKET	KP200IB9L

FL UCOM ASSY

SEMICONDUCTORS

Mark	No.	Description	Parts No.
	IC703		M5218AP
	IC702		M66320FP
	IC701		PDG138A
	Q702, Q705−Q708, Q710		2SC2458
	Q775, Q776		2SC2458

Mark	No.	Description	Parts No.
	Q711		XDA124ES
	Q709		XDA143ES
	Q701		XDC124ES
	Q704		XDC143ES
	D711–D714, D717–D720		AEL1100
	D723–D726, D735–D737, D739		AEL1100
	D745–D756		AEL1100
	D734		BR3361XJ65A
	D701–D710, D715, D716		HSS104–02
	D721, D722, D727–D729, D733		HSS104–02
	D738, D740–D743, D761		HSS104–02
	D773–D779		HSS104–02
COILS AND FILTERS			
	L701		LAU220K
	L702		LAU221K
SWITCHES AND RELAYS			
	S701–S714, S716, S717		ASG1034
	S719, S720, S722–S732		ASG1034
	S733		ASX1015
CAPACITORS			
	C707	(0.047F)	ACH1246
	C780		CCCCH101J50
	C704, C706		CEAS010M50
	C715, C778		CEAS101M10
	C772		CEAS221M16
	C708		CEAS470M50
	C701		CEJA010M50
	C702		CEJA101M10
	C711, C777, C779		CKCYB102K50
	C713		CKCYX104M25
	C705, C709, C773, C774		CKCYX473M25
	C714, C771		CKPUYF103Z25
	C703, C775		CKPUYF473Z16
RESISTORS			
	R725, R728, R731		RD1/4PM271J
	Other Resistors		RD1/8PM□□□J
OTHERS			
	V701	FL TUBE	AAV7017
	CN120	21P SOCKET	AKP1086
	CN121	SOCKET (27P)	AKP1100
		CABLE HOLDER	AKT1012
		CABLE HOLDER (7P)	AKT1080
		SHIELD CASE A (MET)	ANK7009
		SHIELD CASE B (MET)	ANK7010
	X701	CERAMIC RESONATOR (8MHz)	ASS1015
LOGIC ASSY			
SEMICONDUCTORS			
	IC1700		M5223P
	IC1701		TC74HC02AP
	Q1700		2SA1048
	Q1701, Q1703		2SC2458
	Q1702, Q1705		XDA124ES
	Q1704		XDC124ES
	D1700–D1705		HSS104–02
CAPACITORS			
	C1701		CEJA100M50
	C1700		CEJA4R7M50
	C1703		CFTXA103J50
	C1702, C1704		CKCYF103Z50
RESISTORS			
	All Resistors		RD1/8PM□□□J
OTHERS			
	CN38	CONNECTOR (7P)	KPE7
VIDEO ASSY			
CAPACITORS			
	C710		CKCYX104M16
	C712, C776		CKPUYF473Z16
RESISTORS			
	All Resistors		RD1/8PM□□□J
OTHERS			
		PIN JACK (1P)	AKB7011
	CN1	PLUG 5–P	KM250MA5
PHOTO DIODE ASSY			
SEMICONDUCTORS			
	IC2602		PD410PI
	IC2601		PFC502
	IC2603		SBX8025–H
	Q2602		2SC2712
	Q2601		2SK302
COILS AND FILTERS			
	L2601		LAU221K
CAPACITORS			
	C2602		CCSQCH181J50
	C2604		CCSQCH820J50
	C2607		CEAL470M6R3
	C2605		CKSQYB103K50
	C2603		CKSQYB473K50
	C2601, C2606		CKSQYF104Z25
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
		LED HOLDER (PLS)	AMR7040
RF AMP ASSY			
SEMICONDUCTORS			
	IC2501		CXA1600P
	IC2502, IC2504		TC7SU04F
	D2501–D2503		1SS352
COILS AND FILTERS			
	L2501, L2502		LAU221K
CAPACITORS			
	TC2501	(10pF–120pF)	ACM7001
	C2520		CCSQCH150J50
	C2514		CCSQCH681J50
	C2501		CEAL100M6R3
	C2508		CEAL101M6R3
	C2503		CEAL2R2M35
	C2504		CEALR10M50
	C2507		CKSQYB103K50
	C2513		CKSQYB104K25
	C2502, C2506		CKSQYB473K50
RESISTORS			
	All Resistors		RS1/10S□□□J

Mark	No.	Description	Parts No.
OTHERS			
	X2501	CERAMIC RESONATOR (2.26MHz)	ASS7005
AMP ASSY C, SL, SR120W			
SEMICONDUCTORS			
	IC101, IC301		UPC4570C
	Q102, Q103, Q303–Q306		2SA1145
	Q106, Q381, Q382		2SC2240
	Q101, Q104, Q301, Q302		2SC2705
	Q307, Q308		2SC2705
	D101–D107, D301–D308		1SS252
	D381–D386		1SS252
	D108, D109, D309–D312		MTZJ3.3
	TH301		150–203–73002
CAPACITORS			
	C185, C385	(0.01μF/150V)	ACG1005
	C105, C106, C307–C310		CCCSL151K500
	C104, C111, C383, C384		CEAS101M25
	C103, C305, C306		CEAS101M50
	C101, C107, C110, C301, C302		CEAS2R2M50
	C311, C312, C381, C382		CEAS2R2M50
	C108, C109, C317–C320		CFTXA104J50
	C102, C303, C304		CKCYB471K50
RESISTORS			
	R129, R369, R370	(0.33Ω, 5W)	ACN–139
	R116, R333, R334		RD1/2PM392J
	R105, R136, R395, R396		RD1/4PMF101J
	R112, R113, R321–R324		RD1/4PMF102J
	R123, R124, R355–R358		RD1/4PMF151J
	R131, R132, R381–R384		RD1/4PMF222J
	R108, R109, R313–R316		RD1/4PMF270J
	R117, R118, R329–R332		RD1/4PMF680J
	R106, R311, R312		RD1/4PMF821J
	R121, R122, R351–R354		RFA1/4PS470J
	R125–R128, R347–R350		RFA1/4PS4R7J
	R363–R366		RFA1/4PS4R7J
	R119, R335, R336		RN1/4PC1501F
	R120, R337, R338		RN1/4PC6800F
	R130, R371, R372		RS2LMF100J
	Other Resistors		RD1/8PM□□□J
OTHERS			
		CABLE HOLDER (3P)	AKT1076
		CABLE HOLDER (7P)	AKT1080
	CN302	CONNECTOR (9P)	KPC9
	CN301	CONNECTOR (7P)	KPE7
AMP ASSY FL, FR 2/5CH			
SEMICONDUCTORS			
	IC201		UPC4570C
	Q203–Q206, Q213, Q214		2SA1145
	Q281, Q282		2SC2240
	Q201, Q202, Q207, Q208		2SC2705
	Q211, Q212		2SC2705
	D201–D208, D213, D214		1SS252
	D219, D220, D281–D286		1SS252
	D215–D218		MTZJ22D
	D209–D212		MTZJ3.3
CAPACITORS			
	C285	(0.01μF/150V)	ACG1005
	C213–C216		CCCSL151K500
	C207–C210		CCCSL560K500
	C283, C284		CEAS101M25
	C205, C206		CEAS101M50
	C201, C202, C211, C212		CEAS2R2M50
	C281, C282		CEAS2R2M50
	C217–C220		CFTXA104J50
	C203, C204		CKCYB471K50
RESISTORS			
	VR201, VR202		VRTS6HS102
	R267–R270	(0.33Ω, 5W)	ACN–139
	R233, R234		RD1/2PM562J
	R295, R296		RD1/4PMF101J
	R221–R224		RD1/4PMF102J
	R255–R258		RD1/4PMF151J
	R281–R288		RD1/4PMF222J
	R213–R216		RD1/4PMF270J
	R243–R246		RD1/4PMF271J
	R251–R254		RD1/4PMF470J
	R229–R232		RD1/4PMF680J
	R211, R212		RD1/4PMF821J
	R239–R242		RFA1/4PS101J
	R247–R250, R259–R266		RFA1/4PS4R7J
	R235, R236		RN1/4PC3001F
	R237, R238		RN1/4PC8200F
	R271, R272		RS2LMF100J
	R297		RS2LMF104J
	Other Resistors		RD1/8PM□□□J
OTHERS			
		CABLE HOLDER (3P)	AKT1076
		CABLE HOLDER (7P)	AKT1080
	CN204, CN205	4P PLUG	KM200IA4
	CN207	JUMPER CONNECTOR 3–P	KPC3
	CN201	CONNECTOR (4P)	KPE4
AC-3 VOLUME ASSY			
SEMICONDUCTORS			
	IC1351, IC1353		M5220P
	IC1354		NJM78L12A
	IC1356		NJM79L12A
	IC1355		TA8409S
	IC1352		XRA4558–P
	Q1351–Q1354, Q1358		2SC2878
	Q1355		XDA143ES
	Q1357		XDC124ES
	D1352, D1353		HSS104–02
	D1391		RD4.3ESB2
	D1355		RD5.1ESB2
CAPACITORS			
	C1373, C1374		CCCCH221J50
	C1391		CEANP101M10
	C1361, C1362, C1381, C1382, C1393		CEAS100M50
	C1395		CEAS100M50
	C1392		CEAS101M25
	C1351, C1352, C1359, C1360		CEAS4R7M50
	C1371, C1372, C1375, C1378–C1380		CEAS4R7M50
	C1357		CEASR47M50
	C1353, C1354		CKCYB681K50
	C1394, C1396		CKCYF473Z50
	C1355		CKCYX104M16
	C1376		CKPUYF473Z16
RESISTORS			
	VR1351	(50kΩ)	ACX7013
	R1399		RD1/2PM470J
	R1369, R1370, R1389, R1390		RD1/4PM221J
	R1397		RD1/4PM621J
	Other Resistors		RD1/8PM□□□J

Mark	No.	Description	Parts No.
OTHERS			
	CN157	20P SOCKET	KP200IB20L
	CN16	CONNECTOR (6P)	KPE6
REG ASSY			
SEMICONDUCTORS			
	IC2285		XRA4558−P
	Q2259		2SC2458
	Q2260		2SC4793
	Q2288, Q2289		2SK373
	Q2256, Q2285, Q2287		XDA124ES
	Q2257, Q2286		XDC124ES
	D2263, D2264, D2285, D2286		1SS252
	D2257, D2258		RD11ESB2
	D2262, D2271		RD13ESB2
	D2251−D2256		S5688G
CAPACITORS			
	C2251	(0.01µF/150V)	ACG1005
	C2288−C2290	(2.2µF/16V)	ACH1131
	C2292, C2293		CCCCH560J50
	C2253, C2254		CEAS102M35
	C2252		CEAS222M35
	C2295		CEAS101M25
	C2275		CEAS332M35
	C2255		CEAS470M25
	C2291, C2294		CEANP4R7M50
	C2259, C2260, C2262, C2265		CEHAQ101M25
	C2285, C2286		CFTYA224J50
	C2287		CFTYA334J50
	C2256−C2258, C2263		CKCYF103Z50
RESISTORS			
	R2251		RFA1/4PS470J
	R2279		RS1LMF100J
	R2257, R2258, R2280		RS2LMF820J
	R2254		RT5PZ100K
	R2252, R2253		RT5PZ120K
	R2256		RT5PZ680K
	Other Resistors		RD1/8PM□□□J
OTHERS			
		SCREW	ABA−298
		CABLE HOLDER (3P)	AKT1076
		HEAT SINK	ANH−309
	CN2200	4P PLUG	KM200IA4
	CN36	CONNECTOR 3P	KPE3
	CN1100	CONNECTOR (4P)	KPC4
	CN15	CONNECTOR (7P)	KPC7
JOINT ASSY			
SEMICONDUCTORS			
	IC2707		LC4966
	IC2701, IC2703, IC2705		TC9299P
	IC2702, IC2704, IC2706		XRA4558−P
	Q2701		2SC2458
	D2701−D2706		HSS104−02
CAPACITORS			
	C2701−C2712		CEAS100M50
	C2713, C2715, C2720, C2722, C2727		CEAS470M25
	C2729		CEAS470M25
	C2719, C2726, C2733		CKCYB102K50
	C2714, C2716, C2721, C2723, C2728		CKCYF103Z50
	C2730		CKCYF103Z50
	C2717, C2718, C2724, C2725		CKCYF473Z50
	C2731, C2732, C2734, C2735		CKCYF473Z50

Mark	No.	Description	Parts No.
RESISTORS			
	All Resistors		RD1/8PM□□□J
OTHERS			
		CABLE HOLDER	AKT1007
	CN158	20P SOCKET	KP200IB20L
TRANS ASSY			
RESISTORS			
	R1341, R1342		RFA1/4PL4R7J
OTHERS			
	H1341−H1346	FUSE CLIP	AKR1003
		CABLE HOLDER (3P)	AKT1076
AC-3 REG ASSY			
SEMICONDUCTORS			
	IC2253		NJM78M05FAS
	IC2254		NJM79M05FA
	IC2255, IC2256		PQ20RV1E
	Q2291		2SK373
	D2265, D2266, D2291, D2292		1SS252
	D2267−D2270		S5688G
CAPACITORS			
	C2276	(0.01µF/150V)	ACG1005
	C2277		CEAS010M50
	C2267		CEAS101M25
	C2270		CEAS472M16
	C2271, C2272		CEASR33M50
	C2266		CEHAQ101M25
	C2268, C2269		CEHAQ470M25
	C2273, C2274		CKCYF103Z50
RESISTORS			
	R2262		RT5PZ270K
	R2261		RT5PZ390K
	Other Resistors		RD1/8PM□□□J
OTHERS			
		SCREW	ABA−298
		CABLE HOLDER (4P)	AKT1077
		CABLE HOLDER (9P)	AKT1082
	CN41	JUMPER CONNECTOR 3−P	KPC3
PIECE ASSY			
OTHERS			
		CABLE HOLDER (3P)	AKT1076
AC-3 ASSY			
SEMICONDUCTORS			
	IC3241		AK5340−VS
	IC3341, IC3342		KM68257CJ−20
	IC3053		MAX903CSA
	IC3402		MB81C4256A−80LPJ
	IC3051		MC14577CF
	IC3004, IC3052, IC3201, IC3221		NJM4558ED
	IC3604, IC3605, IC3654, IC3655		NJM4558ED
	IC3704, IC3705		NJM4558ED
	IC3602, IC3652, IC3702		PCM1700U−J
	IC3601, IC3651, IC3701		PD00601
	IC3001		PD4606A
	IC3501		PDG137A
	IC3002		SRM20259LTM10
	IC3603, IC3653		TC4052BF
	IC3102		TC74HC157AF

Mark	No.	Description	Parts No.
	IC3054, IC3103, IC3251		TC74HCU04AF
	IC3242		TC7S04F
	IC3031, IC3104		TC7WU04F
	IC3771		TC9214AF
	IC3101		TC9245F
	IC3401		UPD6383GF−3BA
	IC3301		ZR38500
	Q3053		2SA1037K
	Q3261, Q3752		2SA1162
	Q3051, Q3052		2SC2412K
	Q3751		2SC2712
	Q3201, Q3221, Q3611, Q3631, Q3661		2SC3326
	Q3681, Q3711, Q3731		2SC3326
	Q3001, Q3031		DTA144EK
	Q3251		DTC114EK
	D3201, D3202, D3221, D3222		1SS226
	D3001		KV1851
	D3698, D3699		RD8.2MB2
COILS AND FILTERS			
	F3051	(2.88MHz)	ATF7001
	L3051	(68µH)	ATH7001
	L3301		ATL7001
	L3121, L3122		ATX1026
	L3001−L3004, L3031, L3101		VTL1019
	L3103, L3104, L3151, L3241−L3243		VTL1019
	L3251, L3341, L3351, L3401, L3402		VTL1019
	L3501, L3601−L3605, L3651−L3655		VTL1019
	L3701−L3705		VTL1019
CAPACITORS			
	C3251, C3252		CCSQCH100D50
	C3123, C3124, C3591		CCSQCH101J50
	C3616, C3636, C3666, C3686, C3716		CCSQCH151J50
	C3736		CCSQCH151J50
	C3201, C3203, C3221, C3223		CCSQCH220J50
	C3615, C3635, C3665, C3685, C3715		CCSQCH681J50
	C3735		CCSQCH681J50
	C3055		CCSQCH750J50
	C3614, C3634, C3664, C3684, C3714		CCSQCH820J50
	C3734		CCSQCH820J50
	C3391, C3392, C3491, C3492, C3921		CCSRCH101J50
	C3114		CCSRCH121J50
	C3015		CCSRCH220J50
	C3111		CCSRCH221J50
	C3622, C3642, C3672, C3692, C3722		CCSRCH471J50
	C3742		CCSRCH471J50
	C3102, C3612, C3613, C3632, C3633		CEV010M50
	C3662, C3663, C3682, C3683		CEV010M50
	C3712, C3713, C3732, C3733		CEV010M50
	C3206, C3226, C3617, C3637, C3667		CEV100M16
	C3687, C3717, C3773		CEV100M16
	C3618, C3620, C3638, C3640, C3668		CEV100M35
	C3670, C3688, C3690, C3720, C3738		CEV100M35
	C3740, C3774−C3776		CEV100M35
	C3006, C3024, C3033, C3241		CEV101M6
	C3342, C3344, C3401, C3402		CEV101M6
	C3202, C3207, C3208, C3222		CEV220M16
	C3227, C3228		CEV220M16
	C3014, C3059, C3061, C3113, C3121		CEV470M16
	C3321, C3353, C3502		CEV470M16
	C3019, C3602, C3652, C3702		CEV470M6
	C3611, C3631, C3661, C3681, C3711		CEV4R7M35
	C3731		CEV4R7M35
	C3025		CEVNP470M10
	C3066		CEVNPR47M50
	C3299		CEAS102M10

Mark	No.	Description	Parts No.
	C3063		CEVR47M50
	C3511		CKSQYB102K50
	C3001−C3005, C3028, C3056, C3057		CKSQYB103K50
	C3101, C3355		CKSQYB103K50
	C3013, C3020−C3023, C3026, C3031		CKSQYB104K25
	C3054, C3058, C3060, C3115, C3151		CKSQYB104K25
	C3205, C3210, C3211, C3225		CKSQYB104K25
	C3230, C3231, C3248, C3253, C3314		CKSQYB104K25
	C3403−C3407, C3501, C3510, C3601		CKSQYB104K25
	C3651, C3701		CKSQYB104K25
	C3209, C3229		CKSQYB152K50
	C3051		CKSQYB223K50
	C3007, C3027, C3032, C3152, C3254		CKSQYB473K50
	C3603, C3619, C3621, C3639, C3641		CKSQYB473K50
	C3653, C3669, C3671, C3689, C3691		CKSQYB473K50
	C3703, C3719, C3721, C3739, C3741		CKSQYB473K50
	C3016, C3018, C3247, C3411		CKSRYB103K50
	C3112		CKSRYB473K16
	C3053, C3064, C3103, C3116, C3122		CKSRYF104Z25
	C3242, C3243, C3301−C3313		CKSRYF104Z25
	C3315−C3320, C3322, C3323		CKSRYF104Z25
	C3696−C3699		CKSRYF104Z25
RESISTORS			
	R3030, R3151, R3241−R3243		RS1/16S101J
	R3313−R3315, R3514−R3519		RS1/16S101J
	R3068, R3507−R3510		RS1/16S102J
	R3054, R3066, R3069, R3316, R3317		RS1/16S103J
	R3413−R3420, R3552, R3572−R3586		RS1/16S103J
	R3112, R3401−R3411, R3501, R3502		RS1/16S104J
	R3511, R3512, R3520, R3597−R3599		RS1/16S104J
	R3111		RS1/16S122J
	R3115		RS1/16S203J
	R3753, R3754		RS1/16S223J
	R3077		RS1/16S224J
	R3738		RS1/16S272J
	R3059, R3571		RS1/16S472J
	R3026, R3027		RS1/16S473J
	R3113, R3114, R3116		RS1/16S751J
	Other Resistors		RS1/10S□□□J
OTHERS			
		1P PIN JACK	AKB7026
	CN3502	CONNECTOR (9P)	KPC9
	CN3601	CONNECTOR (11P)	KPE11
	CN3201	CONNECTOR (3P)	KPE3
	CN3501	CONNECTOR (5P)	KPE5
	X3501	CERAMIC RESONATOR (8.00MHz)	ASS1015
	X3251	CRYSTAL RESONATOR (18.432MHz)	ASS1035
	X3003	CRYSTAL RESONATOR MODULE (46.08MHz)	ASS7007
	X3352	CRYSTAL RESONATOR MODULE (33.00MHz)	ASS7008
	X3001	CRYSTAL RESONATOR (18.432MHz)	ASS7009

5. DISASSEMBLY

5.1 HOW TO REMOVE THE PCB ASSY

CAUTION !

You will get an electric shock if you touch the Radiator (Heat-sink) when the power cord is connected to the power source. Also, the Electrolytic Capacitor contains a charge even when the power cord is unplugged, so the charge must be removed when the bonnet has been taken off.

< Removing the Charge >

① Connect the Radiator (top side) and either the Chassis or the Rear panel for 2 to 3 seconds with a Resistor of more than 5W/10Ω.

② Connect the +B lead on the J2 and either the Chassis or the Rear panel for 2 to 3 seconds with a Resistor of more than 5W/10Ω.

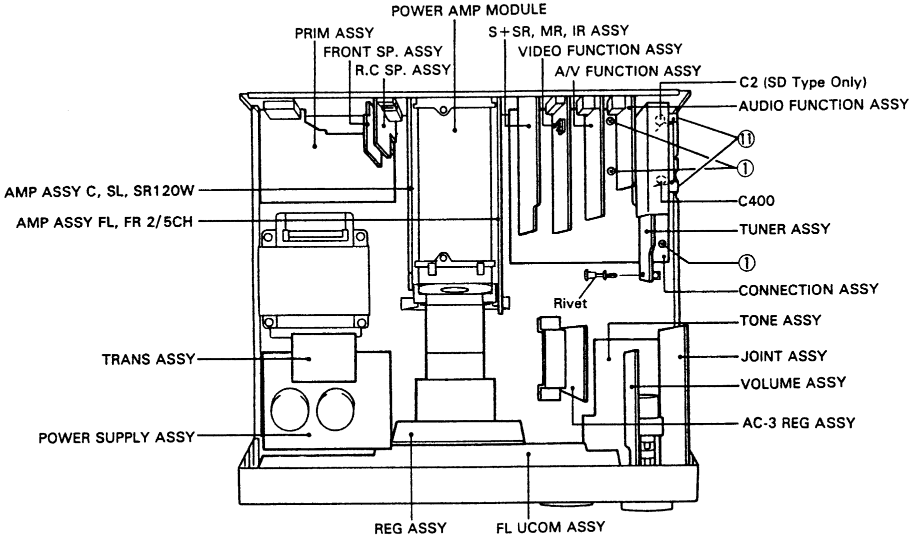

POWER AMP MODULE
PRIM ASSY
S+SR, MR, IR ASSY
FRONT SP. ASSY
VIDEO FUNCTION ASSY
R.C SP. ASSY
A/V FUNCTION ASSY
C2 (SD Type Only)
AUDIO FUNCTION ASSY
⑪
①
AMP ASSY C, SL, SR120W
AMP ASSY FL, FR 2/5CH
C400
TUNER ASSY
①
Rivet
CONNECTION ASSY
TONE ASSY
TRANS ASSY
JOINT ASSY
VOLUME ASSY
POWER SUPPLY ASSY
AC-3 REG ASSY
REG ASSY
FL UCOM ASSY

Fig. 5−1

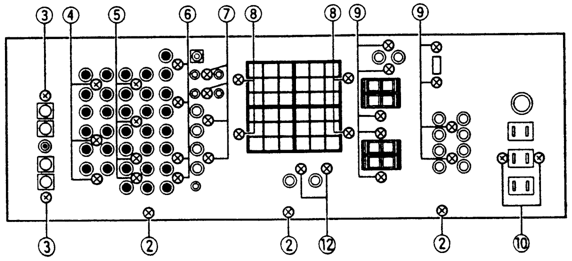

③
④
⑤
⑥
⑦
⑧
⑧
⑨
⑨
③
②
②
⑫
②
⑩

Fig. 5−2

● TUNER Assy

1. Remove the capacitors (C400 and C2) from the shield case. (Shield case side)
2. Remove the screw ⑪ fixing the shield case to the chassis, the rivet, and the screw ③ fixing the TUNER assy to the rear panel.
3. Remove the TUNER assy with the shield case from the CONNECTION assy.

● AUDIO FUNCTION Assy, A/V FUNCTION Assy, VIDEO FUNCTION Assy and S+SR, MR, IR Assy

1. Remove the screws ② to ⑧ and ⑫ from the rear panel side.
2. Pull the rear panel towards you, and remove the pin jacks of the PCB assemblies from the pin jack holes of the rear panel.
3. Raise each PCB assembly to remove it.
4. When removal is difficult even after the screws ② to ⑧ and ⑫ have been removed, also remove the screws ⑨ and ⑩.

● CONNECTION Assy

1. After removal of the capacitors (C400 and C2), remove the screws ② to ⑧ and ⑫. When removal is difficult even after the screws ② to ⑧ and ⑫ have been removed, also remove the screws ⑨ and ⑩.
2. Remove the rivet and screw ①.
3. Remove the CONNECTION assy from the PCB holder.

● AC-3 ASSY

1. Remove the screws ② to ⑦ and ⑫ from the rear panel side.
2. Remove the (REG assy/duct fan) assy (screw ⑬) and move it to the front side. At this time, do not short-circuit the REG assy.
3. Remove the rear panel fan guard (screw ⑧) and the power amp module (screw ⑭). At this time, do not short-circuit the heat sink.
4. Remove the case A (screw ⑮). (Move it to the front and raise the rear.)
5. Remove the screw ⑯ and remove the AC-3 assy.
6. When removal is difficult even after the screws ② to ⑦ and ⑫ have been removed, also remove the screws ⑨ and ⑩.

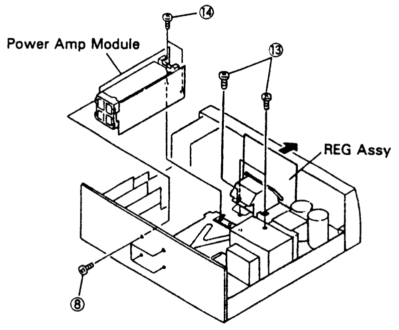

⑭
Power Amp Module
⑬
REG Assy
⑧

Fig. 5−3

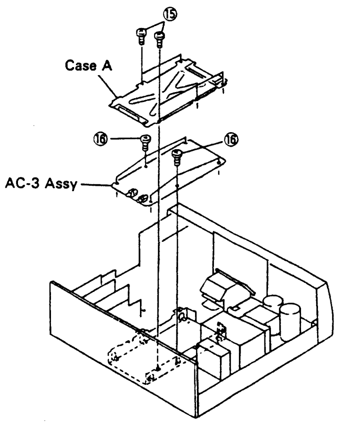

⑮
Case A
⑯
⑯
AC-3 Assy

Fig. 5−4

5.2 FRONT PANEL SECTION

1. Remove the BALANCE knob.
2. Remove the screws ① fixing both front panel L/R sides and the screw ② fixing the front panel bottom side.
3. Remove the rivet and remove the JOINT assy.
4. Remove the MASTER VOLUME knob and screw ③.
5. Remove the screw ④ and then remove the volume holder.
   The volume holder can be removed by pressing the hook part Ⓐ of the front panel with a screwdriver to disengage the lock. (Refer to Fig. 5−6)
6. Press the hook at the bottom side of the front panel to disengage the lock with the chassis, and quietly pull the front panel to the front.

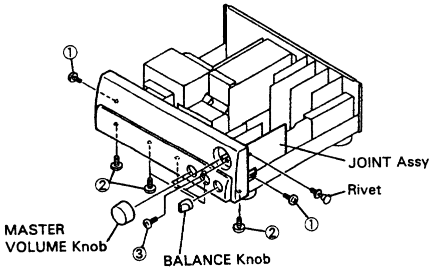

①
②
JOINT Assy
Rivet
①
②
MASTER VOLUME Knob
③
BALANCE Knob

Fig. 5−5

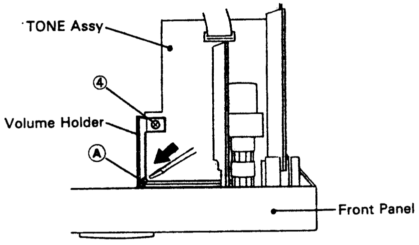

TONE Assy
④
Volume Holder
Ⓐ
Front Panel

Fig. 5−6

6. PCB ASSY DIAGNOSIS

For diagnosis of the standing PCB assemblies of Fig. 5−1, diagnosis can be executed when one of the following PCB assemblies is removed.

PCB assy to be diagnosed	PCB assy which may be removed from the CONNECTION assy	Remarks
AUDIO FUNCTION Assy	● VIDEO FUNCTION Assy ● S+SR, MR, IR Assy ● TUNER Assy	● The AUDIO FUNCTION assy and the A/V FUNCTION assy operate as a pair. When either one is removed, no operation is executed. ● When the VIDEO FUNCTION assy and the S+SR, MR, IR assy are removed from the CONNECTION assy, the earth (ADG) line is interrupted, so that a separate single wire must be prepared and the earth line must be connected. Connect the 2P, L-type terminal of the VIDEO FUNCTION assy and part Ⓐ of the CONNECTION assy with a single wire. (Refer to Figs. 6−1 and 6−2)
A/V FUNCTION Assy		
VIDEO FUNCTION Assy	● AUDIO FUNCTION Assy ● A/V FUNCTION Assy ● TUNER Assy	● The VIDEO FUNCTION assy and the S+SR, MR, IR assy operate as a pair. When either one is removed, no operation is executed. ● As the earth (GND) for the AUDIO FUNCTION Assy and the A/V FUNCTION Assy is connected by a single wire, please do not disconnect the single wire. Please use an extension wire when the single wire is removed.
S+SR, MR, IR Assy		
TUNER Assy	All PCB assemblies other than the TUNER Assy	TUNER Assy operates by itself.

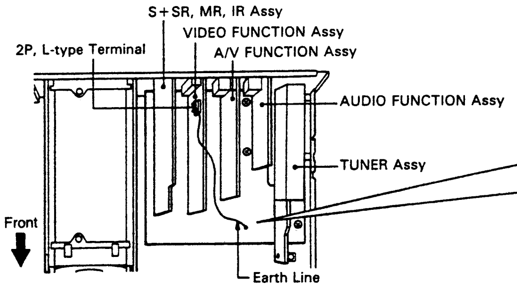

S+SR, MR, IR Assy
VIDEO FUNCTION Assy
2P, L-type Terminal
A/V FUNCTION Assy
AUDIO FUNCTION Assy
TUNER Assy
Front
Earth Line

Fig. 6−1

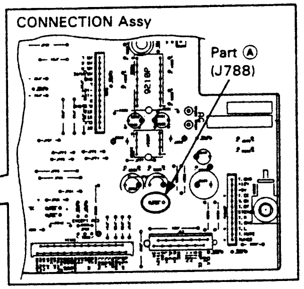

CONNECTION Assy
Part Ⓐ
(J788)

Fig. 6−2

■ OPERATION CONFIRMATION ITEMS

● AC-3 Operation Confirmation

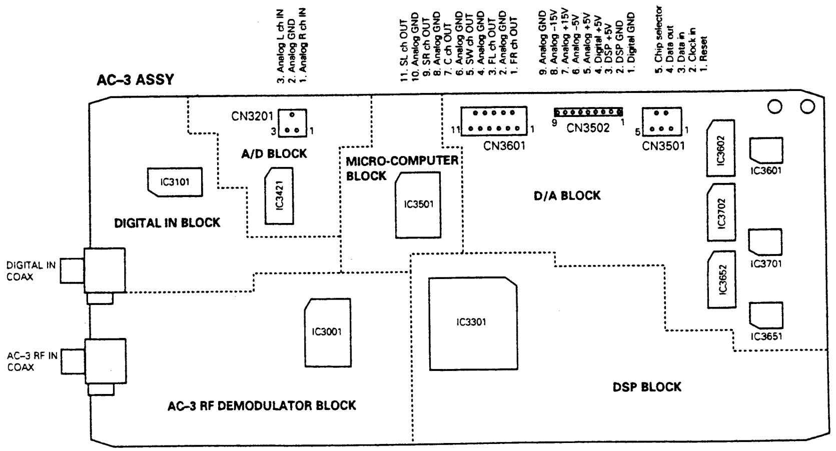
Provide an AC−3 encoded signal as input to AC−3 RFIN or digital IN COAX and confirm output from FL ch, FR ch, SL ch, SR ch, C ch, and SW ch. However, in case of operation confirmation by digital IN, operation of at least one channel shall be confirmed by input from AC-3 RFIN (for operation confirmation for the AC-3 RF demodulator block).

● Dolby Pro-logic Operation Confirmation

Provide input to L ch and confirm output from L ch. Provide input to R ch and confirm output from R ch (−6.0 dB ± 3 dB in regard to the input). Provide a signal with the same phase and the same level to L and R ch and confirm output from C channel (−3.0 dB ± 3 dB in regard to the input). Provide a signal with reverse phase and the same level to L and R ch and confirm output from SL and SR ch (−6.0 dB ± 3 dB in regard to the input).

● Operation Confirmation for Digital IN COAX

Confirm output from L ch with input to L ch and output from R ch with input to R ch for the sampling frequencies 32 kHz, 44.1 kHz, and 48 kHz.


3. Analog L ch IN
2. Analog GND
1. Analog R ch IN
11. SL ch OUT
10. Analog GND
9. SR ch OUT
8. Analog GND
7. C ch OUT
6. Analog GND
5. SW ch OUT
4. Analog GND
3. FL ch OUT
2. Analog GND
1. FR ch OUT
9. Analog GND
8. Analog −15V
7. Analog +15V
6. Analog −5V
5. Analog +5V
4. Digital +5V
3. DSP +5V
2. DSP GND
1. Digital GND
5. Chip selector
4. Data out
3. Data in
2. Clock in
1. Reset
AC-3 ASSY
CN3201
3
1
A/D BLOCK
11
1
CN3601
9
CN3502
1
5
CN3501
1
MICRO-COMPUTER BLOCK
IC3101
IC3421
IC3501
D/A BLOCK
IC3602
IC3601
IC3702
IC3701
IC3652
IC3651
DIGITAL IN BLOCK
DIGITAL IN COAX
AC-3 RF IN COAX
IC3001
IC3301
DSP BLOCK
AC-3 RF DEMODULATOR BLOCK

7. ADJUSTMENTS

7.1 TUNER SECTION

1. Wiring …… Connect the wires as shown in Fig. 7−1−1 (FM ANT. terminal: 75Ω).
2. Preset …… Set the VR451 to center position.
3. When the SD model is used, set the band select switch to AM: 10kHz/FM: 100kHz.

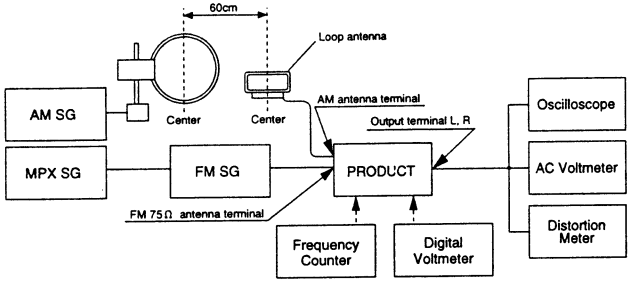

60cm
Loop antenna
Center
Center
AM antenna terminal
Output terminal L, R
AM SG
MPX SG
FM SG
PRODUCT
Oscilloscope
AC Voltmeter
Distortion Meter
FM 75Ω antenna terminal
Frequency Counter
Digital Voltmeter

Fig. 7−1−1 AM and FM adjustment wiring diagram

FM Section

Note : Stereo modulation ; Main 1kHz L+R ±68.25kHz
Pilot 19kHz±6.75kHz

Order	Item	SSG			Receiving Frequency	Adjustment	
		Frequency	Modulation	Level		Adjustment Location	Remarks
1	Increasing front end sensitivity	98MHz	——	Weak Input	98MHz	L402, L404, T402	Set the voltage between terminal 43 and GND to maximum, and check that the practical sensitivity is as specified.
2	Center adjustment	98MHz	——	60dBμV	98MHz	L431	Adjust the voltage between terminals 45 and 46 to 0±50mV.
3	Adjusting VCO	——	OFF	60dBμV	——	VR451	Adjust the output of terminal 44 to 76.0kHz±1.0kHz.
4	Adjusting stereo distortion	98MHz	L-ONLY R-ONLY	60dBμV	98MHz	T402	Minimize the distortion within 1/4 rotation of the core, and check conformity to the specification.
5	Checking lighting levels of TUNED and STEREO IND.	98MHz	STEREO	10dBμV $\left(^{+1\text{dB}}_{-2\text{dB}}\right)$	98MHz	VR432	Adjust TUNED and STEREO IND. to start lighting.

AM Section

Order	Item	SSG			Receiving Frequency	Adjustment	
		Frequency	Modulation	Level		Adjustment Location	Remarks
1	Adjusting lighting level of TUNED IND.	1000kHz	——	——	1000kHz	VR431	Adjust the lighting level of TUNED IND. to 55dBμV/m±3dB.

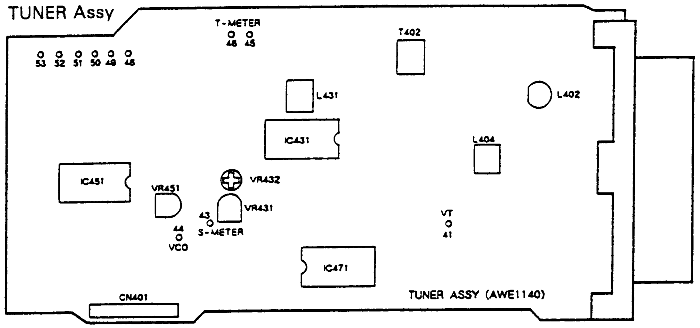

TUNER Assy
T-METER
46
45
53
52
51
50
49
48
T402
L431
L402
IC431
L404
IC451
VR451
VR432
VR431
43
S-METER
44
VCO
VT
41
IC471
CN401
TUNER ASSY (AWE1140)

Fig. 7−1−2 Adjustment Points

7.2 IDLE CURRENT ADJUSTMENT

1. Connect a DC voltmeter to CN205 and CN204 of the AMP ASSY FL, FR 2/5CH.
   L ch: Between pins 1 ans 2 and between pins 3 and 4 of CN205
   R ch: Between pins 1 and 2 and between pins 3 and 4 of CN204
2. Turn VR201 (L ch) and VR202 (R ch) all the way to the left.
3. Switch on the power when the set is completely cold. At the time, bring the SPEAKERS terminals to no-load condition.
4. Wait 5 minutes, and then turn VR201 (L ch) and VR202 (R ch) to the right to set the voltage to 1 mV $^{+1\text{mV}}_{-0.5\text{mV}}$ each.

Note: As the tempetature rises with the passage of time, adjustment should be executed quickly.

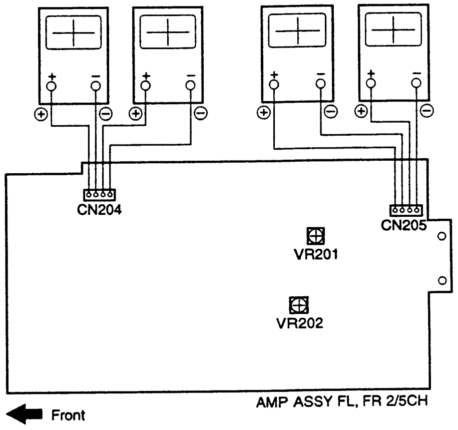
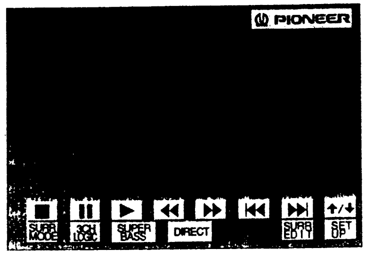

+
−
CN204
CN205
VR201
VR202
AMP ASSY FL, FR 2/5CH
Front

Fig. 7−2−1 Idle Current Adjustment

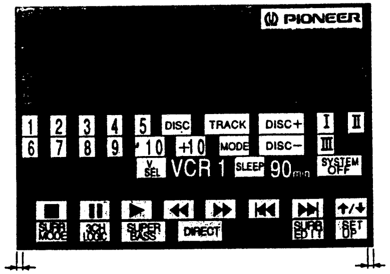
7.3 GUI SCREEN DISPLAY POSITION ADJUSTMENT

1. Connect a monitor TV to the VIDEO OUT terminal.
2. Switch on the power supply.
3. Set the function to CD.
4. Press the GUI MODE key switch to GUI mode (screen 1).
5. Use the MULTI-JOG dial to move the ☜ mark (cursor) on the screen to the ↑/↓ key on the screen.
6. Press the GUI ENTER key. (The condition of the screen 2 will be reached.)
7. While screen 2 is being displayed (it goes out after about 10 to 15 sec.), adjust with TC501 of the VIDEO FUNCTION assy so that the margin on the screen becomes the same on the left and the right.

Note: When the GUI screen goes out, it can be displayed again by turning the MULTI-JOG dial.


PIONEER
SURR MODE
3CH LOGIC
SUPER BASS
DIRECT
SURR EDIT
↑/↓
SET UP

Screen 1


PIONEER
1
2
3
4
5
DISC
TRACK
DISC+
I
II
6
7
8
9
10
+10
MODE
DISC−
III
V SEL
VCR 1
SLEEP
90min
SYSTEM OFF
SURR MODE
3CH LOGIC
SUPER BASS
DIRECT
SURR EDIT
↑/↓
SET UP

Adjust for the same margin at the left and the right.

Screen 2

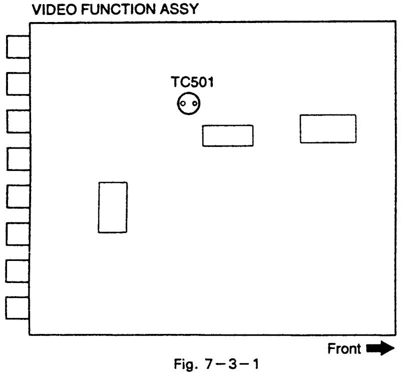

VIDEO FUNCTION ASSY
TC501
Front

Fig. 7−3−1

7.4 REGARD TO PARTIAL EXCHANGE OF THE RF AMP ASSY

For exchange of the part marked by ○ in Fig. 7−4−1, exchange together with the PCB assy.

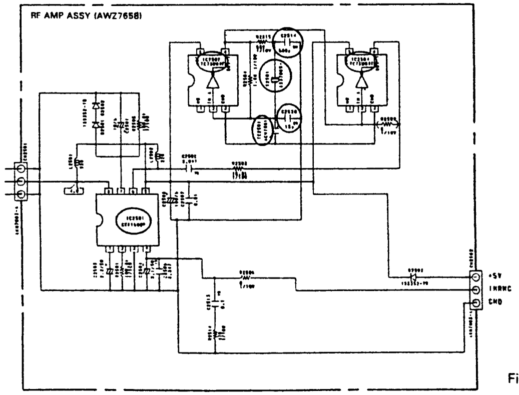

RF AMP ASSY (AWZ7658)
IC2501
C2514
C2502
R2502
+5V
GND

Fig. 7−4−1

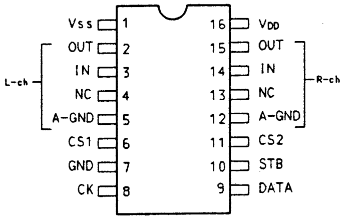
8. IC INFORMATION

- *The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.*

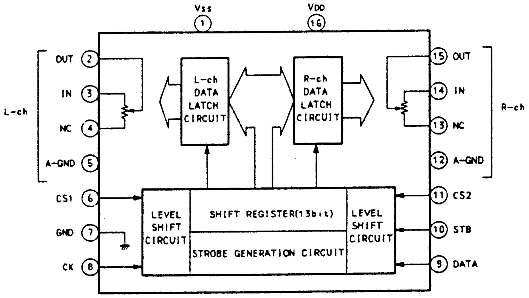
■ TC9299P (IC2701, IC2703, IC2705: JOINT ASSY)

● Electronic Volume IC

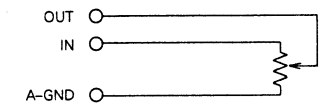
● Pin Assignment (Top View)


Vss 1
OUT 2
IN 3
NC 4
A-GND 5
CS1 6
GND 7
CK 8
L-ch
16 VDD
15 OUT
14 IN
13 NC
12 A-GND
11 CS2
10 STB
9 DATA
R-ch

● Block Diagram

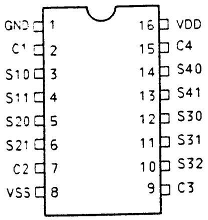

Vss
1
VDD
16
L-ch
OUT 2
IN 3
NC 4
A-GND 5
CS1 6
GND 7
CK 8
L-ch DATA LATCH CIRCUIT
R-ch DATA LATCH CIRCUIT
LEVEL SHIFT CIRCUIT
SHIFT REGISTER(13bit)
STROBE GENERATION CIRCUIT
LEVEL SHIFT CIRCUIT
15 OUT
14 IN
13 NC
12 A-GND
11 CS2
10 STB
9 DATA
R-ch

● Pin Function

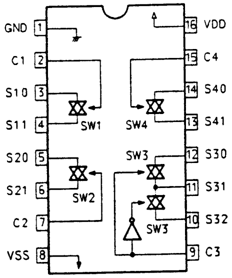
No.	Symbol	Pin Name	Description
1	Vss	Power supply (−)	2 Used power supply ┬ VDD = 6.0 V to 17V ├ GND = 0 V └ VSS = −6.0 V to −17V 1 Used power supply ┬ VDD = 6.0 V to 18V └ VSS = GND = 0 V
7	GND	Ground	
16	VDD	Power supply (+)	
2	L−OUT	Volume output	Volume Circuit 
15	R−OUT		
3	L−IN	Volume input	
14	R−IN		
5	L−A−GND	Analog Reference GND	
12	R−A−GND		
6	CS1	Chip select input	The chip selection code is switched, and up to four units can be used at the same time.
11	CS2		
8	CK	Clock input	Data transfer clock input
9	DATA	Data input	Serial data input for volume setting
10	STB	Strobe input	Strobe input for data writing
4, 13	NC	No connection	———

TC9214AF (IC3771: AC-3 ASSY)

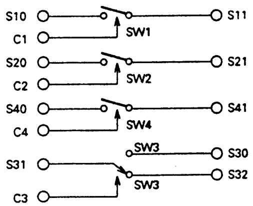
- **Analog Switch**
- Pin Assignment (Top View)


GND 1
C1 2
S10 3
S11 4
S20 5
S21 6
C2 7
VSS 8
16 VDD
15 C4
14 S40
13 S41
12 S30
11 S31
10 S32
9 C3

- Block Diagram


GND 1
C1 2
S10 3
S11 4
S20 5
S21 6
C2 7
VSS 8
16 VDD
15 C4
14 S40
13 S41
12 S30
11 S31
10 S32
9 C3
SW1
SW2
SW3
SW4
SW3

- Pin Function

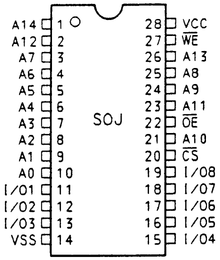
<table>
<tr><th>No.</th><th>Symbol</th><th>Pin Name</th><th>Description</th></tr>
<tr><td>1</td><td>GND</td><td>Ground</td><td rowspan="3">2 power supply operation: +B → VDD
0 V → GND
−B → VSS
1 power supply operation: +B → VDD
0 V → GND, VSS</td></tr>
<tr><td>8</td><td>Vss</td><td>Power supply (−)</td></tr>
<tr><td>16</td><td>VDD</td><td>Power supply (+)</td></tr>
<tr><td>2</td><td>C1</td><td>SW1 control</td><td rowspan="15">Switch Connection


S10
C1
S11
SW1
S20
C2
S21
SW2
S40
C4
S41
SW4
SW3
S30
S31
S32
SW3
C3

Truth Table
<table><tr><th>C1, C2, C3</th><th>SW1, SW2, SW3</th></tr><tr><td>H</td><td>ON</td></tr><tr><td>L</td><td>OFF</td></tr></table>
<table><tr><th>C3</th><th>S30-S31</th><th>S31-S32</th></tr><tr><td>H</td><td>ON</td><td>OFF</td></tr><tr><td>L</td><td>OFF</td><td>ON</td></tr></table></td></tr>
<tr><td>3</td><td>S10</td><td rowspan="2">SW1 Input/output</td></tr>
<tr><td>4</td><td>S11</td></tr>
<tr><td>5</td><td>S20</td><td rowspan="2">SW2 Input/output</td></tr>
<tr><td>6</td><td>S21</td></tr>
<tr><td>7</td><td>C2</td><td>SW2 control</td></tr>
<tr><td>9</td><td>C3</td><td>SW3 control</td></tr>
<tr><td>10</td><td>S32</td><td rowspan="3">SW3 Input/output</td></tr>
<tr><td>11</td><td>S31</td></tr>
<tr><td>12</td><td>S30</td></tr>
<tr><td>13</td><td>S41</td><td rowspan="2">SW4 Input/output</td></tr>
<tr><td>14</td><td>S40</td></tr>
<tr><td>15</td><td>C4</td><td>SW4 control</td></tr>
</table>

KM68257CJ−20 (IC3341, IC3342: AC-3 ASSY)

- **S-RAM**
- Pin Assignment (Top View)

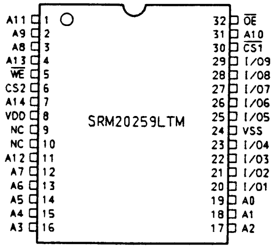

A14 1
A12 2
A7 3
A6 4
A5 5
A4 6
A3 7
A2 8
A1 9
A0 10
I/01 11
I/02 12
I/03 13
VSS 14
SOJ
28 VCC
27 WE
26 A13
25 A8
24 A9
23 A11
22 OE
21 A10
20 CS
19 I/08
18 I/07
17 I/06
16 I/05
15 I/04

- Pin Function

No.	Pin Name	Description
1	A14	Address Inputs
2	A12	
3 | 10	A7 | A0	
11 | 13	I/O1 | I/O3	Data Inputs/Outputs
14	Vss	Ground
15 | 19	I/O4 | I/O8	Data Inputs/Outputs
20	$\overline{CS}$	Chip Select
21	A10	Address Input
22	$\overline{OE}$	Output Enable
23	A11	Address Inputs
24	A9	
25	A8	
26	A13	
27	$\overline{WE}$	Write Enable
28	Vcc	Power (+5V)

SRM20259LTM10 (IC3002: AC-3 ASSY)

- **S-RAM**
- Pin Assignment (Top View)


A11 1
A9 2
A8 3
A13 4
WE 5
CS2 6
A14 7
VDD 8
NC 9
NC 10
A12 11
A7 12
A6 13
A5 14
A4 15
A3 16
SRM20259LTM
32 OE
31 A10
30 CS1
29 I/09
28 I/08
27 I/07
26 I/06
25 I/05
24 VSS
23 I/04
22 I/03
21 I/02
20 I/01
19 A0
18 A1
17 A2

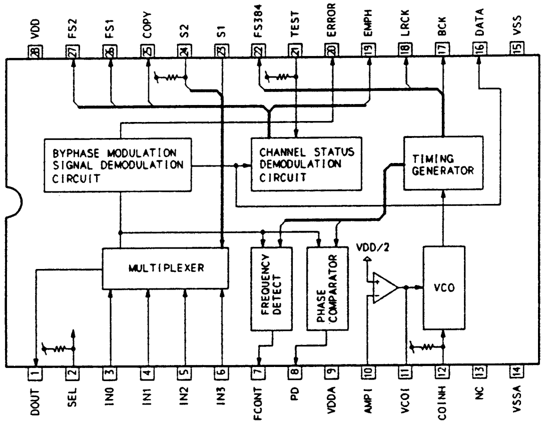
- Pin Function

No.	Pin Name	Description
1	A11	Address Inputs
2	A9	
3	A8	
4	A13	
5	$\overline{WE}$	Write Enable
6	CS2	Chip Select 2
7	A14	Address Input
8	VDD	Power (+5V)
9	NC	Not Connect
10		
11	A12	Address Inputs
12 | 19	A7 | A0	
20 | 23	I/O1 | I/O4	Data Inputs/Outputs
24	Vss	Power (0V)
25 | 29	I/O5 | I/O9	Data Inputs/Outputs
30	$\overline{CS1}$	Chip Select 1
31	A10	Address Input
32	$\overline{OE}$	Output Enable

■ TC9245F (IC3101: AC-3 ASSY)

● Digital Audio Interface Receiver

- Block Diagram


28 VDD
27 FS2
26 FS1
25 COPY
24 S2
23 S1
22 FS384
21 TEST
20 ERROR
19 EMPH
18 LRCK
17 BCK
16 DATA
15 VSS
BYPHASE MODULATION SIGNAL DEMODULATION CIRCUIT
CHANNEL STATUS DEMODULATION CIRCUIT
TIMING GENERATOR
MULTIPLEXER
FREQUENCY DETECT
PHASE COMPARATOR
VDD/2
VCO
1 DOUT
2 SEL
3 IN0
4 IN1
5 IN2
6 IN3
7 FCONT
8 PD
9 VDDA
10 AMPI
11 VCOI
12 VCOINH
13 NC
14 VSSA

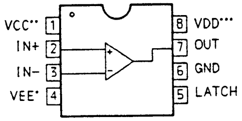
- Pin Function

No.	Symbol	Description			
		I/O	Parallel Mode	I/O	Serial Mode
1	DOUT	O	IN0 to IN2 selection output terminal. Fixed "L" output at the time of IN3 selection		
2	SEL	I	Input terminal for microcomputer interface mode switching. Correspondence to parallel mode when "H" or open and to serial mode when "L".		
3	IN0	I	Digital audio data input terminal.		
4	IN1				
5	IN2				
6	IN3				
7	FCONT	O	PLL mislock detection signal output terminal.		
8	PD	O	Phase comparator phase error signal output terminal.		
9	VDDA	–	Analog power supply voltage terminal.		
10	AMPI	I	Operation amplifier input terminal for LPF.		
11	VCOI	O	Operation amplifier output terminal. (VCO oscillation control voltage output)		
12	$\overline{\text{VCOINH}}$	I	Input terminal for VCO oscillation stop control.		
13	NC	–	Not connected terminal.		
14	VSSA	–	Analog ground terminal.		
15	VSS	–	Digital ground terminal.		
16	DATA	O	Digital audio data output terminal.		
17	BCK	O	Bit clock output terminal. (32 fs)		
18	LRCK	O	LR clock output terminal. L/R channel polarity fixed.	O	LR clock output terminal. L/R channel polarity variable.
19	EMPH	O	Emphasis output terminal. Emphasis with "H".		
20	$\overline{\text{ERROR}}$	O	Error detection flag output terminal. Error detection with "L.		
21	$\overline{\text{TEST}}$	I	Test input terminal.		
22	FS384	O	384 fs clock output terminal.		
23	S1	I	Input selection terminal.	O	192 fs or 128 fs clock output terminal.
24	S2	I		I	Microcomputer data I/O mode switching terminal.
25	COPY	O	Copy prohibition flag output terminal. Copy prohibition with "L".	I/O	Microcomputer data I/O terminal.
26	FS1	O	Sampling frequency bit decode output terminal.	I	Microcomputer data latch pulse input terminal.
27	FS2	O		I	Microcomputer data transfer clock input terminal.
28	VDD	–	Digital power supply voltage terminal.		

■ MAX903CSA (IC3053: AC-3 ASSY)

● Comparator

- Block Diagram


VCC** 1
IN+ 2
IN- 3
VEE* 4
8 VDD***
7 OUT
6 GND
5 LATCH

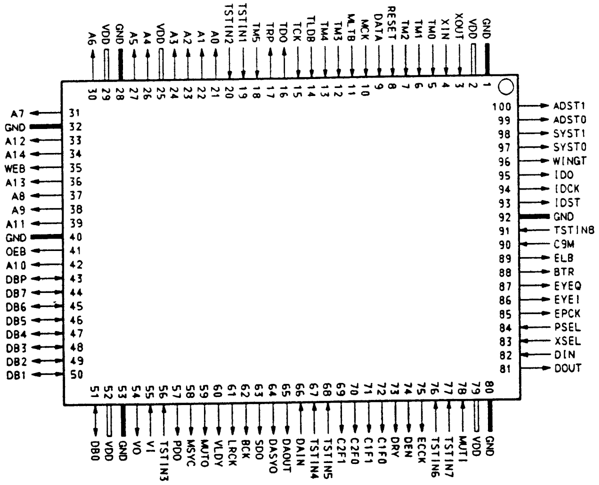
* ANALOG V- AND SUBSTRATE
** ANALOG V+
*** DIGITAL V+

- Pin Function

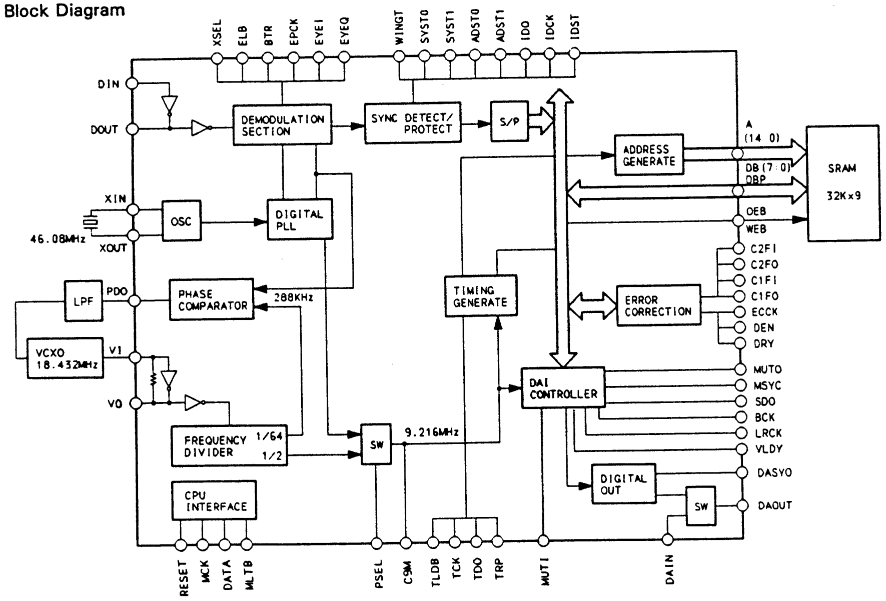
No.	Pin Name	Description
1	Vcc	Analog Power Supply (+)
2	IN+	Input (+)
3	IN−	Input (−)
4	VEE	Analog Power Supply (−) (Substrate)
5	LATCH	Latch Input
6	GND	Ground
7	OUT	Output
8	VDD	Digital Power Supply (+)

PD4606A (IC3001: AC-3 ASSY)

- **AC-3 RF Demodulator**
- Pin Assignment (Top View)


GND 1
VDD 2
XOUT 3
XIN 4
TM0 5
TM1 6
TM2 7
RESET 8
DATA 9
MCK 10
MLTB 11
TM3 12
TM4 13
TLDB 14
TCK 15
TDO 16
TRP 17
TM5 18
TSTIN1 19
TSTIN2 20
A0 21
A1 22
A2 23
A3 24
VDD 25
A4 26
A5 27
GND 28
VDD 29
A6 30
A7 31
GND 32
A12 33
A14 34
WEB 35
A13 36
A8 37
A9 38
A11 39
GND 40
OEB 41
A10 42
DBP 43
DB7 44
DB6 45
DB5 46
DB4 47
DB3 48
DB2 49
DB1 50
DB0 51
VDD 52
GND 53
VO 54
VI 55
TSTIN3 56
PDO 57
MSYC 58
MUTO 59
VLDY 60
LRCK 61
BCK 62
SDO 63
DASYO 64
DAOUT 65
DAIN 66
TSTIN4 67
TSTIN5 68
C2F1 69
C2F0 70
C1F1 71
C1F0 72
DRY 73
DEN 74
ECCK 75
TSTIN6 76
TSTIN7 77
MUTI 78
VDD 79
GND 80
DOUT 81
DIN 82
XSEL 83
PSEL 84
EPCK 85
EYEI 86
EYEQ 87
BTR 88
ELB 89
C9M 90
TSTIN8 91
GND 92
IDST 93
IDCK 94
IDO 95
WINGT 96
SYST0 97
SYST1 98
ADST0 99
ADST1 100

- Block Diagram


XSEL
ELB
BTR
EPCK
EYEI
EYEQ
WINGT
SYST0
SYST1
ADST0
ADST1
IDO
IDCK
IDST
DIN
DOUT
DEMODULATION SECTION
SYNC DETECT/PROTECT
S/P
ADDRESS GENERATE
A (14 0)
DB (7 0)
DBP
OEB
WEB
SRAM 32K×9
XIN
46.08MHz
XOUT
OSC
DIGITAL PLL
LPF
PDO
PHASE COMPARATOR
288KHz
TIMING GENERATE
ERROR CORRECTION
C2FI
C2FO
C1FI
C1FO
ECCK
DEN
DRY
VCXO 18.432MHz
VI
VO
DAI CONTROLLER
MUTO
MSYC
SDO
BCK
LRCK
VLDY
FREQUENCY DIVIDER
1/64
1/2
SW
9.216MHz
DIGITAL OUT
DASYO
SW
DAOUT
CPU INTERFACE
RESET
MCK
DATA
MLTB
PSEL
C9M
TLDB
TCK
TDO
TRP
MUTI
DAIN

- Pin Function

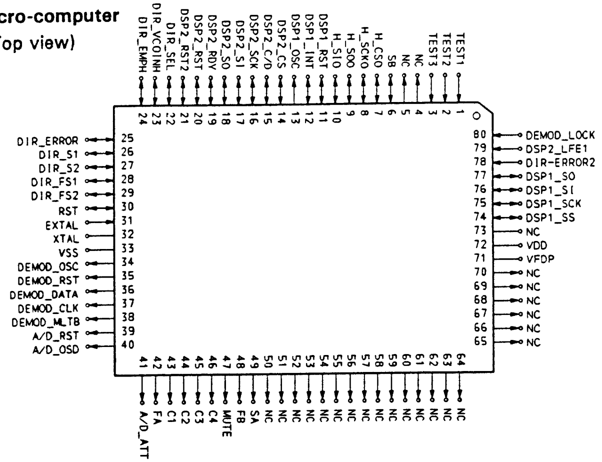
No.	Pin Name	I/O	Description
1	GND	–	GND (0 V)
2	VDD	–	Power supply (+5 V)
3	XOUT	O	Crystal oscillation circuit output
4	XIN	I	Crystal oscillation circuit input
5	TM0	I	For IC test mode setting, normally not connected.
6	TM1		
7	TM2		
8	RESET	I	System reset, reset with "L". Becomes "L" once at the time of power ON.
9	DATA	I	Serial data input from the CPU (LSB first)
10	MCK	I	CPU serial input clock. The data are latched at the rising edge of the clock.
11	MLTB	I	CPU input latch. The serial data from the CPU (8 bit) are latched to the register.
12	TM3	I	For IC test mode setting, normally not connected.
13	TM4		
14	TLDB	I	Tag code load signal. With "L", the tag code is loaded to the 16 bit shift register.
15	TCK	I	Clock for tag code output. Data output at the rising edge of the clock.
16	TDO	O	Tag code serial data output (MSB first).
17	TRP	O	Tag code update signal. Becomes "H" on completion of the correction operation for one block when there has been no error for the tag code.
18	TM5	I	For IC test mode setting, normally not connected.
19	TSTIN1	I	For IC test. Normally not connected.
20	TSTIN2		
21	A0	O	External RAM address output. Address 0 (LSB)
22	A1	O	External RAM address output. Address 1
23	A2	O	External RAM address output. Address 2
24	A3	O	External RAM address output. Address 3
25	VDD	–	Power supply (+5 V)
26	A4	O	External RAM address output. Address 4
27	A5	O	External RAM address output. Address 5
28	GND	–	GND (0 V)
29	VDD	–	Power supply (+5 V)
30	A6	O	External RAM address output. Address 6
31	A7	O	External RAM address output. Address 7

No.	Pin Name	I/O	Description
32	GND	–	GND (0 V)
33	A12	O	External RAM address output. Address 12
34	A14	O	External RAM address output. Address 14 (MSB)
35	WEB	O	External RAM write enable signal. Active with "L".
36	A13	O	External RAM address output. Address 13
37	A8	O	External RAM address output. Address 8
38	A9	O	External RAM address output. Address 9
39	A11	O	External RAM address output. Address 11
40	GND	–	GND (0 V)
41	OEB	O	External RAM output enable signal. Active with "L".
42	A10	O	External RAM address output. Address 10
43	DBP	I/O	External RAM data terminal. For erasure pointer.
44 | 51	DB7 | DB0	I/O	External RAM data terminal. Data bus 7 | External RAM data terminal. Data bus 0
52	VDD	–	Power supply (+5 V)
53	GND	–	GND (0 V)
54	VO	O	VCXO output
55	VI	I	VCXO input
56	TESTIN3	I	For IC test. Normally not connected.
57	PDO	O	Output of the phase comparator (3 states)
58	MSYC	O	"H" at the time of an AC−3 sync signal. For monitoring.
59	MUTO	O	Muting output. Muting with "H". Becomes "H" with "MUTI = H" or when AC−3 is not in sync.
60	VLDY	O	Output of the validity flag. Correct data with "L".
61	LRCK	O	L/R switching clock. 48 kHz. L channel with "H".
62	BCK	O	Bit clock. 3.072 MHz
63	SDO	O	Serial data output
64	DASYO	O	Digital out preamble B identification signal
65	DAOUT	O	Digital out output
66	DAIN	I	Digital audio interface signal input. According to the internal register setting, the signal from digital out processed in the IC and "DAIN" is selected and put out to "DAOUT".
67	TSTIN4	I	For IC test. Normally not connected.
68	TSTIN5		

No.	Pin Name	I/O	Description
69	C2F1	O	Indication of the C2 correction error status. Output whether complete correction was possible or not.
70	C2F0	O	Indication of the C2 correction error status. Output of the number of errors with C2.
71	C1F1	O	Indication of the C1 correction error status. Output of error or no error with C1.
72	C1F0	O	Indication of the C1 correction error status. Output of the number of errors with C1.
73	DRY	O	For monitoring of the error correction section
74	DEN	O	For monitoring of the error correction section
75	ECCK	O	Clock of the error correction section. 576 kHz
76	TSTIN6	I	For IC test. Normally not connected.
77	TSTIN7		
78	MUTI	I	Muting input. Muting with "H".
79	VDD	–	Power supply (+5 V)
80	GND	–	GND (0 V)
81	DOUT	O	QPSK inversion output
82	DIN	I	QPSK signal input
83	XSEL	I	Crystal selection. 46.08 MHz with "H", 36.864 MHz with "L".
84			
85	EPCK	O	QPSK eye pattern clock. 288 kHz
86	EYEI	O	Eye pattern output: Phase I
87	EYEQ	O	Eye pattern output: Phase Q
88	BTR	O	
89	ELB	O	
90	C9M	O	9.216 MHz
91	TSTIN8	I	For IC test. Normally not connected.
92	GND	–	GND (0 V)
93	IDST	O	Signal indicating the start position
94	IDCK	O	ID signal sample clock. The data change with the dropping edge of the clock. 576 kHz
95	IDO	O	ID data output (MSB first)
96	WINGT	O	Becomes "L" while the correction block sync signal is being searched.
97	SYST0	O	Indicates the lock status of the correction block sync signal.
98	SYST1	O	Indicates the lock status of the correction block sync signal.
99	ADST0	O	Indicates the continuity status of the correction block ID address.
100	ADST1	O	Indicates the continuity status of the correction block ID address.

■ PDG137A (IC3501: AC-3 ASSY)

- **AC-3 Control Micro-computer**
- Pin Assignment (Top view)


1 TEST1
2 TEST2
3 TEST3
4 NC
5 NC
6 SB
7 H_CSO
8 H_SCKO
9 H_SOO
10 H_SIO
11 DSP1_RST
12 DSP1_INT
13 DSP1_OSC
14 DSP2_CS
15 DSP2_C/D
16 DSP2_SCK
17 DSP2_SI
18 DSP2_SO
19 DSP2_RDY
20 DSP2_RST
21 DSP2_RST2
22 DIR_SEL
23 DIR_VCOINH
24 DIR_EMPH
25 DIR_ERROR
26 DIR_S1
27 DIR_S2
28 DIR_FS1
29 DIR_FS2
30 RST
31 EXTAL
32 XTAL
33 VSS
34 DEMOD_OSC
35 DEMOD_RST
36 DEMOD_DATA
37 DEMOD_CLK
38 DEMOD_MLTB
39 A/D_RST
40 A/D_OSD
41 A/D_ATT
42 FA
43 C1
44 C2
45 C3
46 C4
47 MUTE
48 FB
49 SA
50 NC
51 NC
52 NC
53 NC
54 NC
55 NC
56 NC
57 NC
58 NC
59 NC
60 NC
61 NC
62 NC
63 NC
64 NC
65 NC
66 NC
67 NC
68 NC
69 NC
70 NC
71 VFDP
72 VDD
73 NC
74 DSP1_SS
75 DSP1_SCK
76 DSP1_SI
77 DSP1_SO
78 DIR-ERROR2
79 DSP2_LFE1
80 DEMOD_LOCK

- Pin Function

No.	Pin Name	I/O	Description	CPU
1	TEST1	I	"L" or "H" is set with an external resistor. At the time of "L" level, operation as microcomputer for AWX7016. At the time of "H" level, operation as microcomputer for AWX7017.	PE3/INT3
2	TEST2	I	Fixed to "L" with an external resistor.	PE4
3	TEST3			PE5
4	NC	O	Not used terminal.	PE6
5				PE7
6	SB	O	REAR channel output level control terminal 2. Connected to terminal B of IC3653.	PB0
7	H_CSO	I/O	Chip selection I/O terminal for communication with the microcomputer on the set side. Connected to the CS terminal of CN3501. During communication with "L".	CSO_
8	H_CSKO	I	Serial data transfer clock I/O terminal for communication with the microcomputer on the set side. Connected to the SCK terminal of CN3501.	SCKO_
9	H_SOO	I	Serial data input terminal for communication with the microcomputer on the set side. Connected to the SO terminal of CN3501. Matched to the name of the microcomputer on the set side. The data I/O direction is opposite to the terminal name.	SIO
10	H_SIO	O	Serial data output terminal for communication with the microcomputer on the set side. Connected to the SI terminal of CN3501. Matched to the name of the microcomputer on the set side. The data I/O direction is opposite to the terminal name.	SOO
11	DSP1_RST	O	IC3301 reset control terminal. Reset with "L". Connected to the RESET terminal of IC3301.	PB5
12	DSP1_INT	O	IC3301 interrupt control terminal, Interrupt with "L". Connected to the INT_ terminal of IC3301.	PB6
13	DSP1_OSC	O	IC3301 oscillation control terminal. Oscillation with "H". Connected to the NC terminal of X3352.	PB7
14	DSP2_CS	O	IC3401 serial data transfer chip selection output terminal. Under control with "L". Connected to the CS_ terminal of IC3401.	PC0

No.	Name	I/O	Description	CPU
15	DSP2_C/D	O	IC3401 serial data transfer command/data switching control terminal. Connected to the C_/D terminal of IC3401. During command transfer with "L". During data transfer with "H".	PC1
16	DSP2_SCK	O	IC3401 serial data transfer clock output terminal. Connected to the SCK_ terminal of IC3401.	PC2
17	DSP2_SI	O	IC3401 serial data output terminal. Connected to the SI terminal of IC3401. Matched to the terminal name of IC3401. The data I/O direction is opposite to the terminal name.	PC3
18	DSP2_SO	I	IC3401 serial data input terminal. Connected to the SO terminal of IC3401. Matched to the terminal name of IC3401. The data I/O direction is opposite to the terminal name.	PC4
19	DSP2_RDY	I	IC3401 ready information input terminal. Connected to the RDY terminal of IC3401. "H" at the time of ready.	PC5
20	DSP2_RST	O	IC3401 reset control terminal 1. Connected to the RST_ terminal of IC3401.	PC6
21	DSP2_RST2	O	IC3401 reset control terminal 2. Connected to the RST2_ terminal of IC3401.	PC7
22	DIR_SEL	O	IC3102 input switching control terminal. Connected to the SELECT1 terminal of IC3102.	PA0
23	DIR_VCOINH	O	IC3101 oscillation control terminal. Connected to the VCOINH_ terminal of IC3101. Oscillation stop with "L".	PA1
24	DIR_EMPH	I	IC3101 emphasis information input terminal. Connected to the EMPH terminal of IC3101. "H" when the emphasis of the program source is ON.	PA2
25	DIR_ERROR	I	IC3101 error information input terminal. Connected to the ERROR_ terminal of IC3101. "L" when DIR is not locked.	PA3
26	DIR_S1	O	IC3101 input switching control terminal 1. Connected to the S1 terminal of IC3101.	PA4
27	DIR_S2	O	IC3101 input switching control terminal 2. Connected to the S2 terminal of IC3101.	PA5
28	DIR_FS1	I	Sampling frequency information input terminal 1 for the IC3101 input signal. Connected to the FS2 terminal of IC3101.	PA6
29	DIR_FS2	I	Sampling frequency information input terminal 2 for the IC3101 input signal. Connected to the FS2 terminal of IC3101.	PA7
30	RST	I	System reset input terminal. Connected to the RST terminal of CN3501. Reset with "L".	RST_
31	EXTAL	I	Crystal connection terminal for system clock oscillation. When an external clock is to be supplied, input is made to the EXTAL terminal, and a clock with the reverse phase is given as input to the XTAL terminal.	EXTAL
32	XTAL	O	Crystal connection terminal for system clock oscillation. When an external clock is to be supplied, input is made to the EXTAL terminal, and a clock with the reverse phase is given as input to the XTAL terminal.	XTAL
33	VSS	–	GND terminal.	Vss
34	DEMOD_OSC	O	IC3001 oscillation control terminal. Connected to the NC terminal of X3003. Oscillation with "H".	PD0
35	DEMOD_RST	O	IC3001 reset control terminal. Connected to the RESET terminal of IC3001. Reset with "L".	PD1
36	DEMOD_DATA	O	IC3001 serial data output terminal. Normally not used. Connected to the DATA terminal of IC3001.	PD2
37	DEMOD_CLK	O	IC3001 serial data transfer clock output terminal. Normally not connected. Connected to the MCK terminal of IC3001.	PD3
38	DEMOD_MLTB	O	IC3001 serial data output terminal. Normally not used. Connected to the MLTB terminal of IC3001.	PD4
39	A/D_RST	O	IC3241 reset control terminal. Connected to the PD terminal of IC3241.	PD5

No.	Name	I/O	Description	CPU
40	A/D_OSC	O	IC3241 oscillation control terminal. Oscillation with "L". Connected to the B terminal of Q3251.	PD6
41	A/D_ATT	O	IC3241 input attenuation control terminal. Attenuation with "L".	PD7
42	FA	O	FRONT channel output level control terminal 1. Connected to the A terminal of IC3603.	PF0
43	C1	O	SW sound output control terminal. Output to the FRONT channel with "H". Connected to the C1 terminal of IC3771.	PF1
44	C2	O	SW sound output control terminal. Output to the REAR channel with "H". Connected to the C2 terminal of IC3771.	PF2
45	C3	O	SW sound output control terminal. Output to the SW channel with "H". Connected to the C3 terminal of IC3771.	PF3
46	C4	O	SW sound output control terminal. Output to the CENTER channel with "H". Connected to the C4 terminal of IC3771.	PF4
47	MUTE	O	Output muting control terminal. Muting with "H".	PF5
48	FB	O	FRONT channel output level control terminal 2. Connected to the B terminal of IC3603.	PF6
49	SA	O	REAR channel output level control terminal 1. Connected to the A terminal of IC3653.	PF7
50 | 54	NC	O	Not used	S16 | S20
55 | 62	NC	O	Not used	T15/S21 | T8/S28
63 | 70	NC	O	Not used	T7 | T0
71	VFDP	–	Power supply terminal for FDP.	VFDP
72	VDD	–	Positive power supply terminal.	VDD
73	NC	–	Connected to VDD at the time of normal operation.	NC
74	DSP1_SS	O	IC3301 serial data transfer slave selection control terminal. Slave with "L". Connected to the SS_ terminal of IC3301.	PG0
75	DSP1_SCK	O	IC3301 serial data transfer clock output terminal. Connected to the SCK terminal of IC3301.	PG1
76	DSP1_SI	O	IC3301 serial data output terminal. Connected to the S1 terminal of IC3301. Matched to the terminal name of IC3301. The data I/O direction is opposite to the terminal name.	PG2
77	DSP1_SO	I	IC3301 serial data input terminal. Connected to the S0 terminal of IC3301. Matched to the terminal name of IC3301. The data I/O direction is opposite to the terminal name.	PG3
78	DIR–ERROR2	I	IC3101 error information input terminal. Connected to the ERROR_ terminal of IC3101. "L" when DIR is not locked.	PE0/INT0
79	DSP2_LFE1	I	IC3401 low sound (LFE) detection information input terminal 1. Connected to the GF2 terminal of IC3401. "H" when low sound (LFE) is detected.	PE1/INT1
80	DEMOD_LOCK	I	IC3001 lock information input terminal. Connected to the MUT0 terminal of IC3001. "H" when the demodulator (IC3001) is not locked.	PE2/INT2

No.	Pin Name	Description
100	SCKIN	Clock input/output for group B serial port
101	SDA	Data input for serial port A
102	GP14	General-purpose input pin
103	VCC	
104	MUTE_	Mute pin
105	SO	Serial port interface: serial data output (SPI)
106	GND	
107	SDD	Data output for serial port D
108	VCC	
109	SDC	Data output for serial port C
110	SDB	Data output for serial port B
111	WSB/FSB	Group B serial port (for input) word selection or frame sync input/output.
112	SI	Serial port interface: serial data input (SPI)
113	VCC	
114		
115	SS_	Serial port interface: slave select input (SPI)
116	GND	
117		
118	GPIO0	General-purpose input/output pin
119	VCC	
120	GPIO1	General-purpose input/output pin
121 | 125	D0 | D4	This is a bidirectional data bus for external memory access.
126	VCC	
127	D5	This is a bidirectional data bus for external memory access.
128	GND	

9. FL INFORMATION

AAV7017 (V701: FL UCOM ASSY)

- **FL TUBE**

NOTE
1) F1,F2 --- Filament
2) NP ------- No pin
3) NC ------- No connection
4) DL ------- Datum Line
5) 1G~12G --- Grid

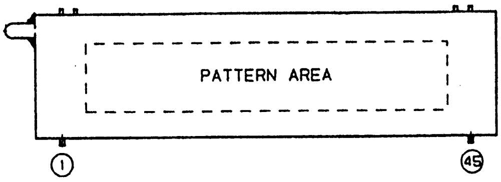
- Pin Connection

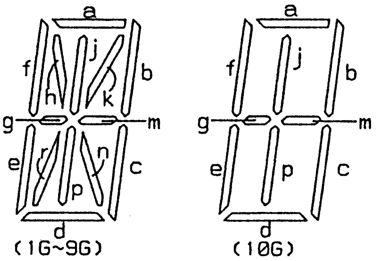
PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
CONNECTION	F1	F1	NP	NP	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G

PIN NO.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
CONNECTION	12G	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	P15	P14	P13	P12

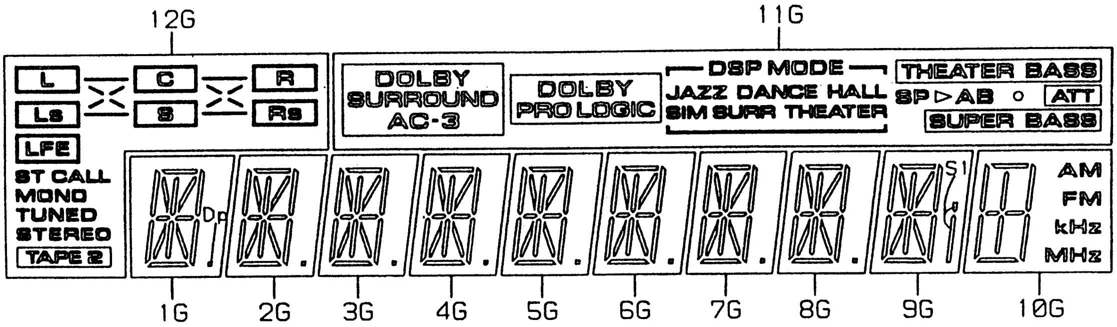
PIN NO.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
CONNECTION	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	NP	F2	F2

- Pin Assignment


PATTERN AREA
①
㊺


a
f
j
h
k
b
g
m
e
r
n
c
p
d
(1G~9G)
a
f
j
b
g
m
e
p
c
d
(10G)

- Grid Assignment

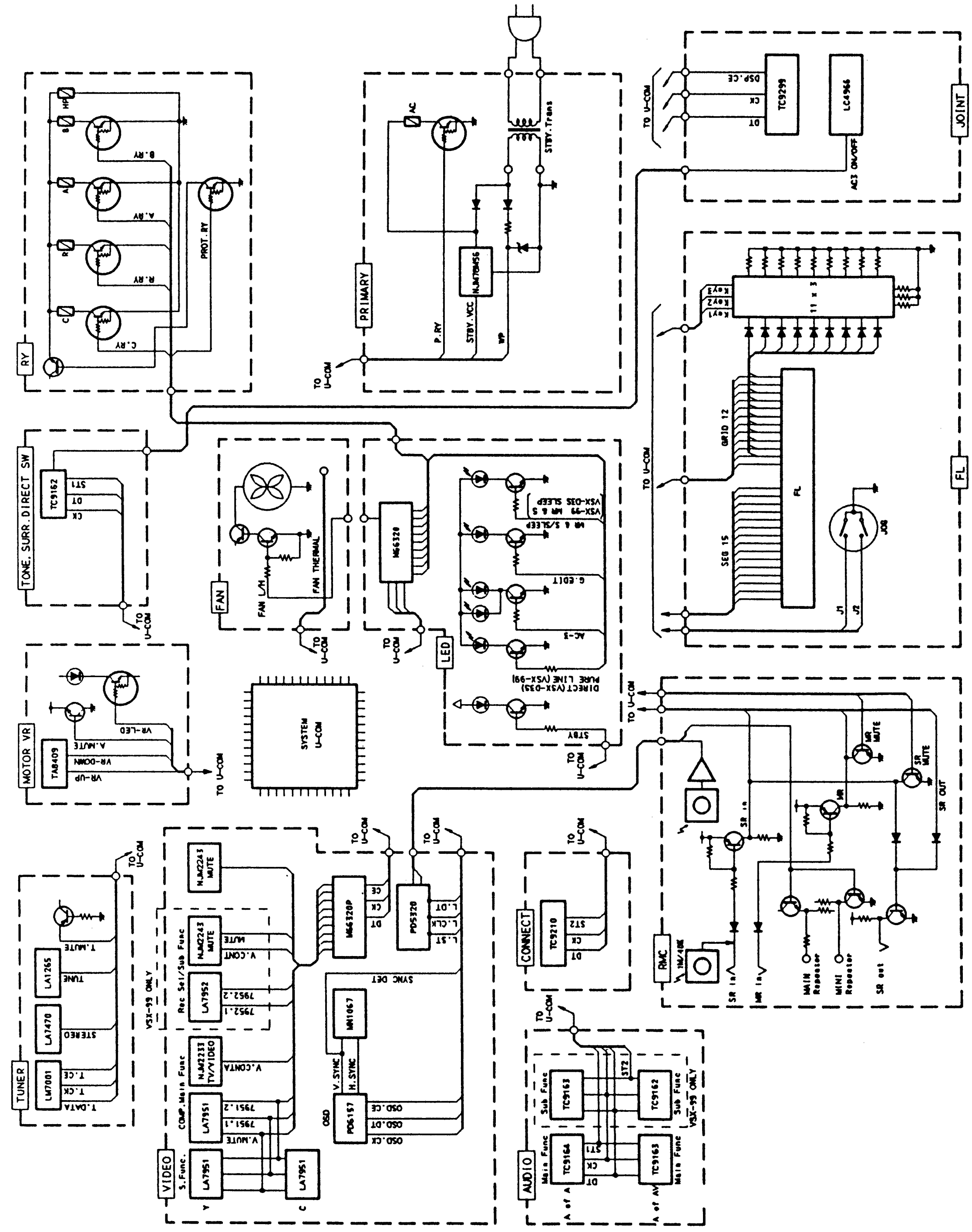

12G
11G
L
C
R
Ls
S
Rs
LFE
DOLBY SURROUND AC-3
DOLBY PRO LOGIC
DSP MODE
JAZZ DANCE HALL
SIM SURR THEATER
THEATER BASS
SP ▷ A B
o
ATT
SUPER BASS
ST CALL
MONO
TUNED
STEREO
TAPE 2
Dp
S1
AM
FM
kHz
MHz
1G
2G
3G
4G
5G
6G
7G
8G
9G
10G

- Anode Connection

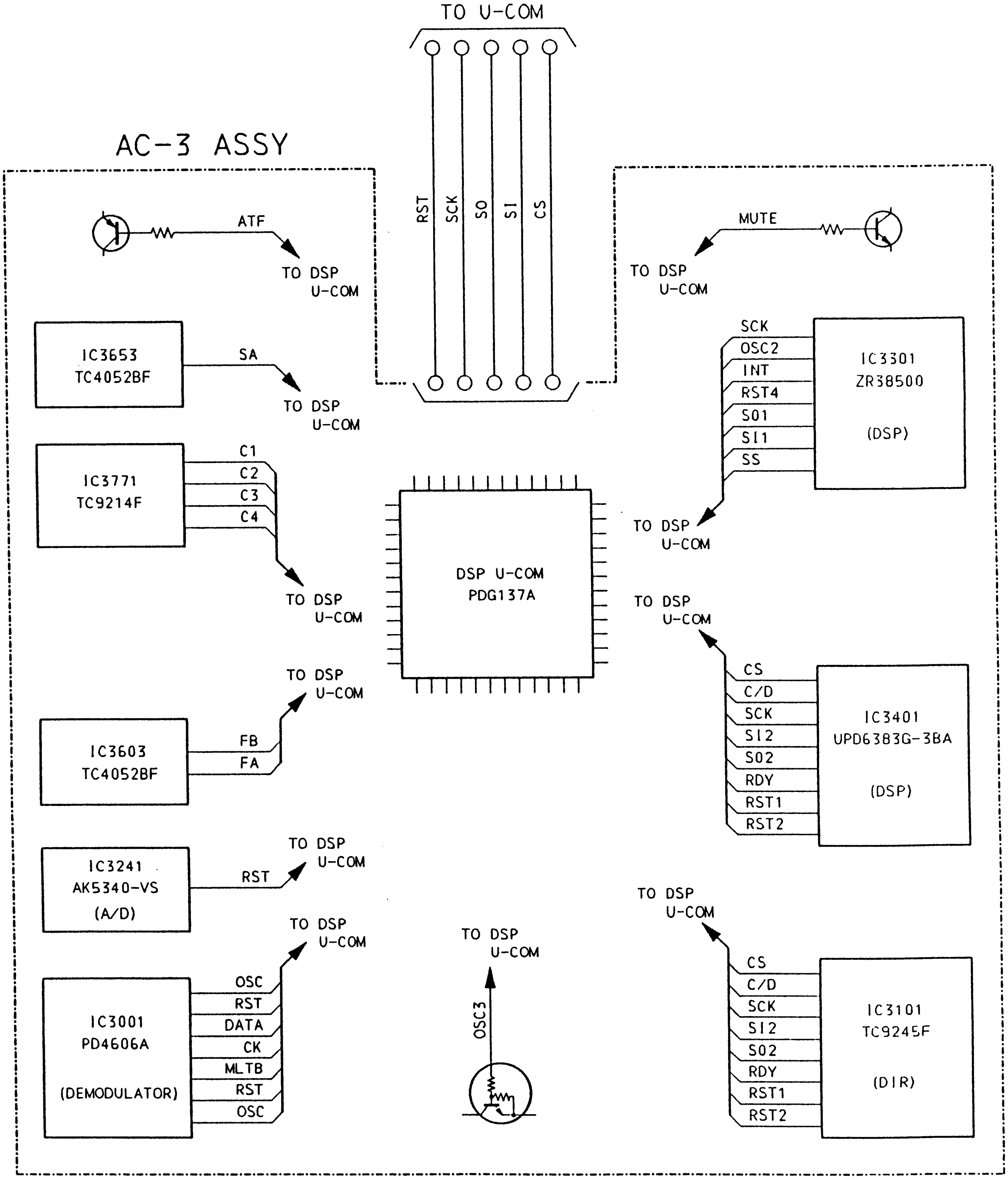
	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
P1	a	a	a	a	a	a	a	a	a	a	SUPER BASS	— Rs
P2	j	j	j	j	j	j	j	j	j	j	ATT	S
P3	k	k	k	k	k	k	k	k	k	AM	o	\ /
P4	h	h	h	h	h	h	h	h	h	FM	B	/ \
P5	b	b	b	b	b	b	b	b	b	b	A	— R
P6	f	f	f	f	f	f	f	f	f	f	SP ▷	C
P7	g	g	g	g	g	g	g	g	g	g	THEATER BASS	L —
P8	m	m	m	m	m	m	m	m	m	m	DSP MODE	Ls —
P9	c	c	c	c	c	c	c	c	c	c	JAZZ	LFE
P10	e	e	e	e	e	e	e	e	e	e	DANCE	(LFE)
P11	n	n	n	n	n	n	n	n	n	kHz	HALL	ST CALL
P12	r	r	r	r	r	r	r	r	r	MHz	SIM SURR	MONO
P13	p	p	p	p	p	p	p	p	p	p	THEATER	TUNED
P14	d	d	d	d	d	d	d	d	d	d	DOLBY PRO LOGIC	STEREO
P15	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp	S1	-	DOLBY SURROUND AC-3	TAPE 2

10. BLOCK DIAGRAM

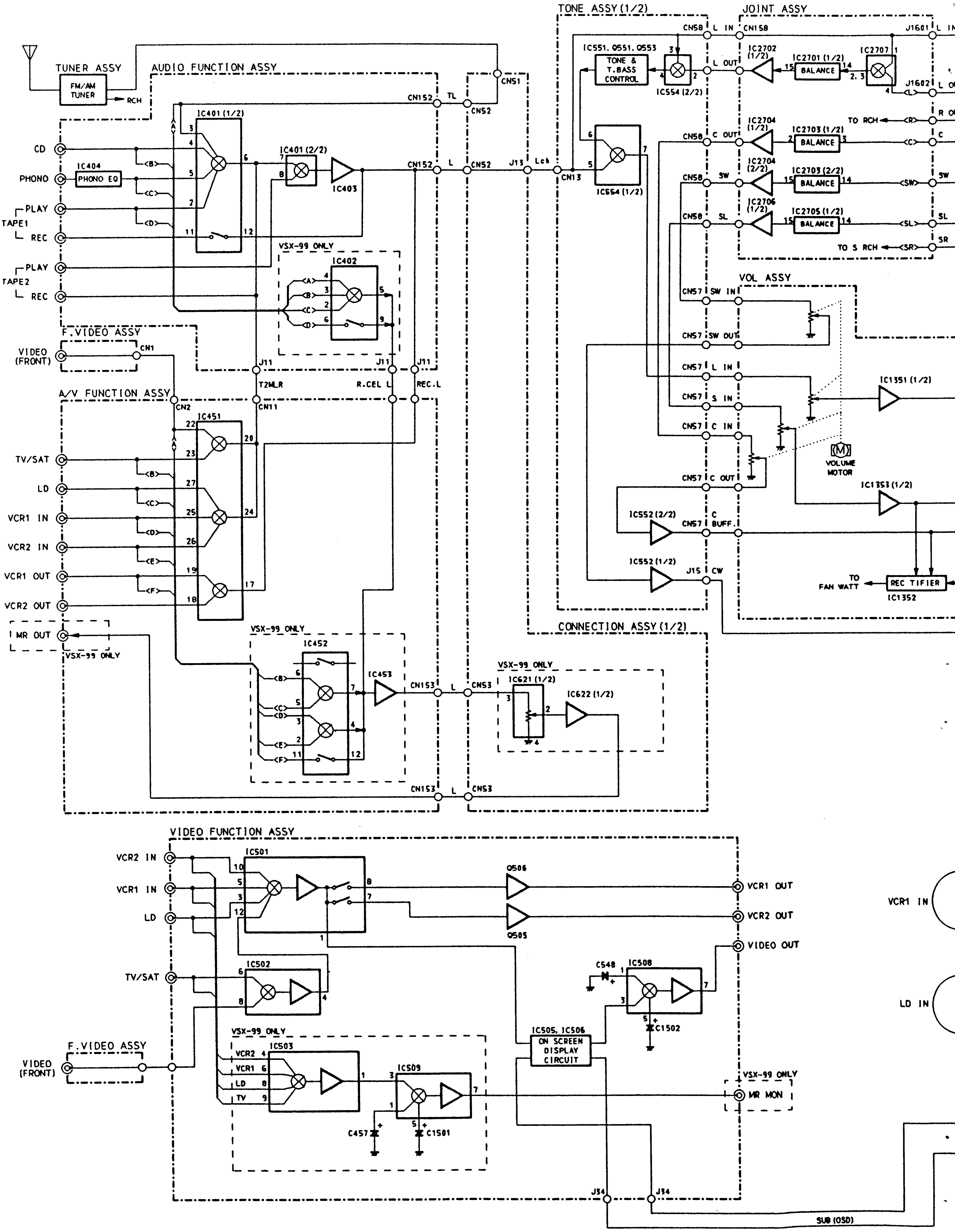
10.1 MICROCOMPUTER SECTION

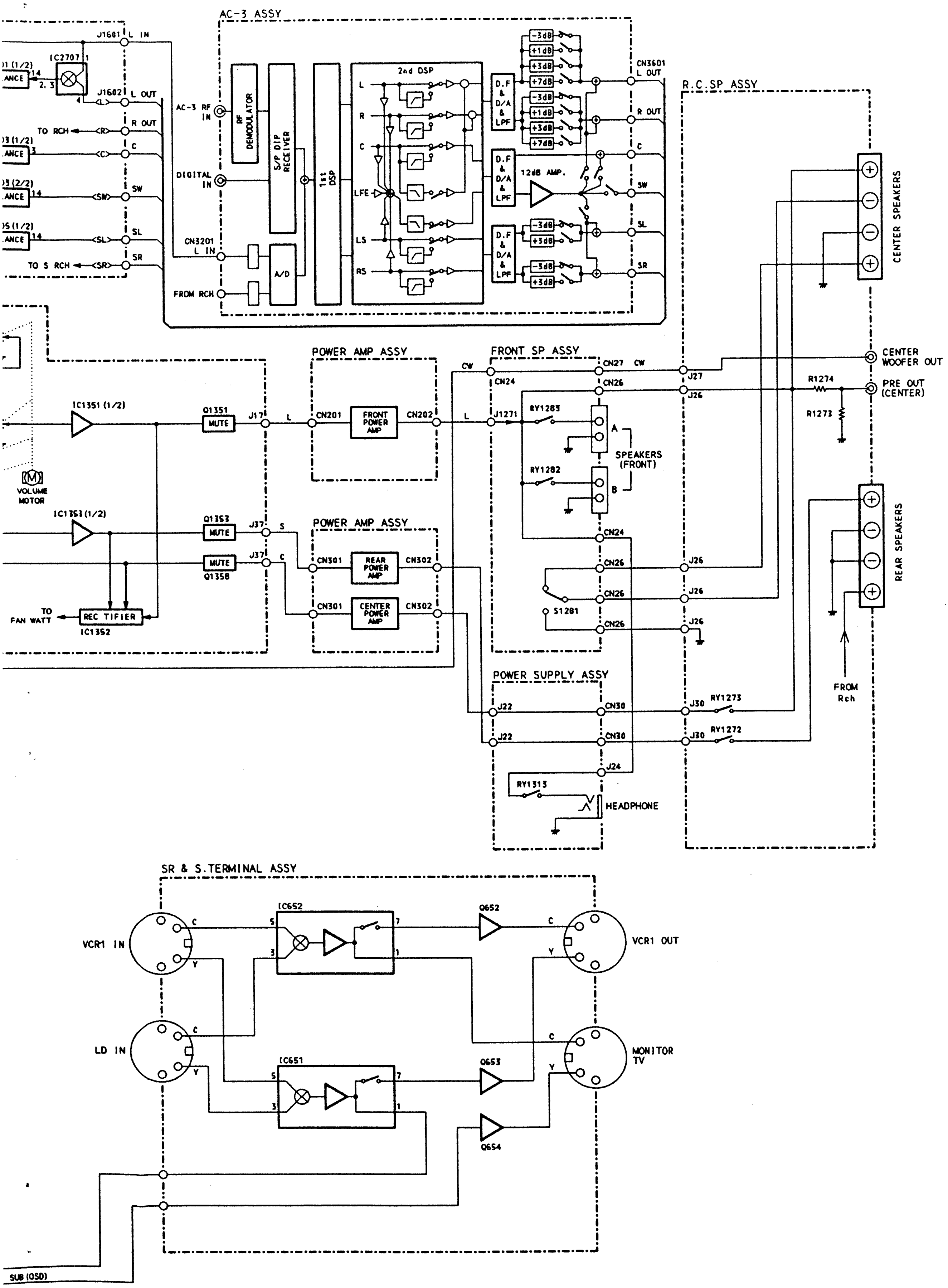

RY
HP
B
A
R
C
B.RY
A.RY
R.RY
C.RY
PROT.RY
PRIMARY
AC
STBY.Trans
NJM78M56
P.RY
STBY.VCC
WP
TO U-COM
JOINT
TC9299
LC4966
DSP.CE
CK
DT
AC3 ON/OFF
FL
Key1
Key2
Key3
11 × 3
GRID 12
SEG 15
JOG
J1
J2
TONE, SURR. DIRECT SW
TC9162
ST1
FAN
FAN L/H
FAN THERMAL
M66320
LED
VSX-99 MR & S
VSX-D3S SLEEP
MR & S/SLEEP
G.EDIT
AC-3
PURE LINE (VSX-99)
DIRECT (VSX-D3S)
STBY
MOTOR VR
TA8409
VR-LED
A.MUTE
VR-DOWN
VR-UP
SYSTEM U-COM
TUNER
LM7001
LA1265
LA7470
T.MUTE
TUNE
STEREO
T.CE
T.CK
T.DATA
VIDEO
NJM2243 MUTE
Rec Sel/Sub Func
VSX-99 ONLY
LA7952
7952.1
7952.2
MUTE
V.CONT
COMP. Main Func
NJM2233 TV/VIDEO
V.CONTA
LA7951
7951.1
7951.2
V.MUTE
S.Func.
Y
C
M66320P
CE
PD5320
L.DT
L.CLK
L.ST
SYNC DET
MN1067
V.SYNC
H.SYNC
OSD
PD6157
OSD.CE
OSD.DT
OSD.CK
CONNECT
TC9210
ST2
RMC
1M/40K
SR in
MR in
MR MUTE
SR MUTE
MR
SR OUT
MAIN Repeater
MINI Repeater
SR out
AUDIO
Main Func
Sub Func
TC9164
TC9163
A of A
A of AV

10.2 AC-3 SECTION


TO U-COM
RST
SCK
SO
SI
CS
AC-3 ASSY
ATF
TO DSP U-COM
MUTE
TO DSP U-COM
IC3653
TC4052BF
SA
TO DSP U-COM
SCK
OSC2
INT
RST4
S01
SI1
SS
IC3301
ZR38500
(DSP)
TO DSP U-COM
IC3771
TC9214F
C1
C2
C3
C4
TO DSP U-COM
DSP U-COM
PDG137A
TO DSP U-COM
CS
C/D
SCK
SI2
S02
RDY
RST1
RST2
IC3401
UPD6383G-3BA
(DSP)
TO DSP U-COM
IC3603
TC4052BF
FB
FA
IC3241
AK5340-VS
(A/D)
RST
TO DSP U-COM
TO DSP U-COM
TO DSP U-COM
OSC3
TO DSP U-COM
IC3001
PD4606A
(DEMODULATOR)
OSC
RST
DATA
CK
MLTB
RST
OSC
CS
C/D
SCK
SI2
S02
RDY
RST1
RST2
IC3101
TC9245F
(DIR)

10.3 AUDIO AND VIDEO SECTION


A
B
C
D
TUNER ASSY
FM/AM TUNER
RCH
AUDIO FUNCTION ASSY
CD
PHONO
IC404
PHONO EQ
TAPE1 PLAY
REC
TAPE2 PLAY
REC
IC401 (1/2)
IC401 (2/2)
IC403
VSX-99 ONLY
IC402
CN152
TL
L
CN51
CN52
J13
Lch
J11
T2MLR
R.CEL L
REC.L
CN11
F.VIDEO ASSY
VIDEO (FRONT)
CN1
A/V FUNCTION ASSY
CN2
IC451
TV/SAT
LD
VCR1 IN
VCR2 IN
VCR1 OUT
VCR2 OUT
MR OUT
VSX-99 ONLY
IC452
IC453
CN153
CN53
IC621 (1/2)
IC622 (1/2)
CONNECTION ASSY (1/2)
TONE ASSY (1/2)
CN58
L IN
L OUT
C OUT
SW
SL
IC551, Q551, Q553
TONE & T.BASS CONTROL
IC554 (2/2)
IC554 (1/2)
CN13
JOINT ASSY
CN158
IC2702 (1/2)
IC2701 (1/2)
BALANCE
IC2707
J1601
J1602
IC2704 (1/2)
IC2703 (1/2)
IC2704 (2/2)
IC2703 (2/2)
IC2706 (1/2)
IC2705 (1/2)
TO RCH
TO S RCH
<R>
<C>
<SW>
<SL>
<SR>
VOL ASSY
CN57
SW IN
SW OUT
L IN
S IN
C IN
C OUT
C BUFF
VOLUME MOTOR
IC1351 (1/2)
IC1353 (1/2)
IC552 (2/2)
IC552 (1/2)
J15
CW
TO FAN WATT
REC TIFIER
IC1352
VIDEO FUNCTION ASSY
VCR2 IN
VCR1 IN
LD
TV/SAT
IC501
IC502
Q506
Q505
VCR1 OUT
VCR2 OUT
VIDEO OUT
C548
IC508
C1502
IC505, IC506
ON SCREEN DISPLAY CIRCUIT
VSX-99 ONLY
IC503
VCR2
VCR1
LD
TV
IC509
C457
C1501
MR MON
J34
SUB (OSD)
VCR1 IN
LD IN


AC-3 ASSY
J1601 L IN
IC2707
J1602 L OUT
<L>
TO RCH <R>
R OUT
<C>
C
<SW>
SW
<SL>
SL
TO S RCH <SR>
SR
AC-3 RF IN
DIGITAL IN
CN3201 L IN
FROM RCH
RF DEMODULATOR
S/P DIF RECEIVER
A/D
1st DSP
2nd DSP
L
R
C
LFE
LS
RS
D.F & D/A & LPF
12dB AMP.
-3dB
+1dB
+3dB
+7dB
CN3601 L OUT
R OUT
C
SW
SL
SR
R.C.SP ASSY
CENTER SPEAKERS
REAR SPEAKERS
CENTER WOOFER OUT
PRE OUT (CENTER)
R1274
R1273
IC1351 (1/2)
Q1351
MUTE
VOLUME MOTOR
IC1353 (1/2)
Q1353
Q1358
J17
J37
L
S
C
REC TIFIER
IC1352
TO FAN WATT
POWER AMP ASSY
CN201
FRONT POWER AMP
CN202
CN301
REAR POWER AMP
CENTER POWER AMP
CN302
FRONT SP ASSY
CW
CN27
CN24
CN26
J27
J26
J1271
RY1283
RY1282
A
B
SPEAKERS (FRONT)
S1281
POWER SUPPLY ASSY
J22
CN30
J30
RY1273
RY1272
J24
RY1313
HEADPHONE
FROM Rch
SR & S.TERMINAL ASSY
VCR1 IN
LD IN
IC652
IC651
Q652
Q653
Q654
VCR1 OUT
MONITOR TV
C
Y
SUB (OSD)

11. FOR VSX-D3S/SD AND VSX-99/KU/CA

NOTES :

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

$560\Omega \rightarrow 56 \times 10^1 \rightarrow 561$ ························ *RD1/8PM* $\boxed{5}\,\boxed{6}\,\boxed{1}$ *J*
$47k\Omega \rightarrow 47 \times 10^3 \rightarrow 473$ ························ *RD1/4PS* $\boxed{4}\,\boxed{7}\,\boxed{3}$ *J*
$0.5\Omega \rightarrow 0R5$ ·· *RN2H* $\boxed{0}\,\boxed{R}\,\boxed{5}$ *K*
$1\Omega \rightarrow 010$ ·· *RS1P* $\boxed{0}\,\boxed{1}\,\boxed{0}$ *K*

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

$5.62k\Omega \rightarrow 562 \times 10^1 \rightarrow 5621$ ················· *RM1/4PC* $\boxed{5}\,\boxed{6}\,\boxed{2}\,\boxed{1}$ *F*

■ CONTRAST OF MISCELLANEOUS PARTS

VSX-D3S/SD, VSX-99/KU/CA and VSX-D3S/KU/CA have the same construction except for the following :

Mark	Symbol & Description	Part No.			Remarks
		VSX-D3S/KU/CA	VSX-D3S/SD	VSX-99/KU/CA	
NSP	PS & AMP assy	AWK7141	AWK7170	AWK7142	
	PRIM assy	AWZ7962	AWZ7963	AWZ7962	
NSP	FRONT SP. assy	AWZ7625	AWZ7625	AWZ7770	
	CONNECTION assy	AWZ7633	AWZ7633	AWZ7799	
NSP	SMALL SIGNAL assy	AWK7146	AWK7146	AWK7147	
	AUDIO FUNCTION assy	AWZ7796	AWZ7796	AWZ7797	
	A/V FUNCTION assy	AWZ7636	AWZ7636	AWZ7637	
	VIDEO FUNCTION assy	AWZ7640	AWZ7640	AWZ7639	
	S+SR, MR, IR assy	AWZ7647	AWZ7647	AWZ7950	
NSP	FRONT assy	AWK7151	AWK7151	AWK7152	
	FL UCOM assy	AWZ7652	AWZ7652	AWZ7653	
⚠	S1 Voltage selector	Not used	AKX−507	Not used	∗
⚠	S2 Voltage selector	Not used	AKX1004	Not used	∗
	S3 Slide switch (for channel step)	Not used	ASH1044	Not used	∗
	S4 Slide switch (PAL ↔ NTSC)	Not used	ASH1044	Not used	∗
⚠	T1 Power transformer (AC120V)	ATS7080	Not used	ATS7080	
⚠	T1 Power transformer (AC110V/120−127V/220V/240V)	Not used	ATS7081	Not used	
⚠	C1 Capacitor (0.1μF/250V)	Not used	ACE−507	Not used	∗
⚠	C2, C5 Capacitor	Not used	CKDYX103M25	Not used	∗
⚠	FU1 Fuse (10A/125V)	AEK1035	Not used	AEK1035	
⚠	FU1, FU2 Fuse (5A/125V)	Not used	AEK−126	Not used	∗
⚠	AC power cord	ADG1146	ADG1051	ADG1072	
	AC cord spacer	Not used	Not used	ANG1153	∗
	Strain relief	AEP−113	AEC−882	Not used	
⚠	Fuse holder	Not used	AKR1005	Not used	∗
NSP	Fuse holder bracket	Not used	ANG−528	Not used	∗
	Front panel	AMB7231	AMB7231	AMB7232	
	Rear panel	ANC7250	ANC7251	ANC7252	
NSP	Center panel	AAK7152	AAK7152	AAK7161	
	Display panel	AAK7162	AAK7162	AAK7163	
	Cushion rubber	AEB7034	AEB7034	Not used	
	Side board L assy	Not used	Not used	AMS7001	∗
	Side board R	Not used	Not used	AMS7002	∗
	Side sash L	Not used	Not used	AAP7016	∗
	Side sash R	Not used	Not used	AAP7017	∗
	Wood color	Not used	Not used	AEC1165	∗
	Barrier (PVC)	Not used	AEC1412	Not used	∗
	Bonnet	ANE7077	ANE7077	ANE7078	
	Screw (for side board)	Not used	Not used	ABA1086	∗
	Screw (for bonnet)	FBT40P060FZK	FBT40P060FZK	Not used	
	Screw (for rear panel)	Not used	Not used	ABA1006	∗
	Screw (for slide switch)	Not used	VMZ26P040FZK	Not used	∗
	Screw (for power transistor)	ABA1037	ABA1037	ABA1082	
	Packing case	AHD7197	AHD7198	AHD7199	
	Front pad	AHA7056	AHA7056	AHA7075	
	Rear pad	AHA7057	AHA7057	AHA7076	
	Operating instructions (English)	ARB7050	ARB7050	ARB7051	
	Operating instructions (Chinese/Spanish)	Not used	ARC7075	Not used	
	65 label	ORW1069	Not used	ORW1069	

Note ∗: Refer to pages 5−7.

■ CONTRAST OF PCB ASSEMBLIES

PRIM Assy

AWZ7963 and AWZ7962 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7962	AWZ7963	
	T51	ATT7006	ATT7007	
	R52 (2.2MΩ, 1/2W)	ACN−208	Not used	

AUDIO FUNCTION Assy

AWZ7797 and AWZ7796 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7796	AWZ7797	
	IC402	Not used	TC9163AN	∗
	C437, C438	Not used	CKSQYF103Z50	∗
	C448	Not used	CCSQCH102J50	∗
	R444	Not used	RS1/10S102J	∗
	6P Pin jack	AKB7013	Not used	
	4P Pin jack	Not used	AKB7014	∗
	2P Pin jack	Not used	AKB7019	∗

Note ∗: Refer to SCH−2.

FRONT SP. Assy

AWZ7770 and AWZ7625 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7625	AWZ7770	
	Speaker terminal 8－P	AKE1011	AKE1036	

CONNECTION Assy

AWZ7799 and AWZ7633 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7633	AWZ7799	
	IC621	Not used	TC9210P	*
	IC622	Not used	XRA4558－P	*
	Q626	Not used	XDA124ES	*
	D621, D622, D628	Not used	HSS104－02	*
	C621, C622, C627, C628	Not used	CEAS100M50	*
	C623, C624	Not used	CCCCH101J50	*
	C629, C630	Not used	CEAS470M25	*
	C631, C632	Not used	CKCYF103Z50	*
	C633, C634	Not used	CKCYF473Z50	*
	C635, C636	Not used	CKCYB102K50	*
	C643	Not used	CEAS101M25	*
	R625, R626, R631, R632	Not used	RD1/8PM104J	*
	R633, R634	Not used	RD1/2PM221J	*
	R635－R637	Not used	RD1/8PM102J	*
	CN53 10P Plug	KM200IB10	Not used	
	CN53 14P Plug	Not used	KM200IB14	

Note *: *Refer to SCH－5.*

VIDEO FUNCTION Assy

AWZ7639 and AWZ7640 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7640	AWZ7639	
	IC503	Not used	LA7952	*
	IC509	Not used	NJM2243L	*
	L503, L509	Not used	LAU680J	*
	C507－C511, C543, C547, C1501	Not used	CEAS470M25	*
	C512, C545	Not used	CKSQYF103Z50	*
	C549	Not used	CEANP470M25	*
	C1509	Not used	CEAS471M10	*
	R510, R511, R535, R1503	Not used	RS1/10S102J	*
	R542	Not used	RS1/10S103J	*
	R546	Not used	RS1/10S750J	*
	1P Pin jack	Not used	AKB7020	*

Note *: *Refer to SCH－4.*

A/V FUNCTION Assy

AWZ7637 and AWZ7636 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7636	AWZ7637	
	IC452	Not used	TC9162AN	*
	IC453	Not used	XRA4558N-P	*
	Q452, Q453	Not used	2SC2878	*
	C477, C478	Not used	CKSQYB103K50	*
	C479, C480	Not used	CEAS2R2M50	*
	C485, C486	Not used	CEAS4R7M50	*
	C488	Not used	CCSQCH102J50	*
	C492, C493	Not used	CCSQCH101J50	*
	C496, C497	Not used	CKSQYB332K50	*
	R472, R473	Not used	RS1/10S223J	*
	R475-R478	Not used	RS1/10S104J	*
	R479, R480	Not used	RS1/10S224J	*
	R481, R482	Not used	RS1/10S222J	*
	R486-R488	Not used	RS1/10S102J	*
	2P Pin jack	Not used	AKB7019	*
	CN153 10P	KP200IB10L	Not used	
	CN153 14P	Not used	KP200IB14L	

*Note *: Refer to SCH-2.*

S+SR, MR, IR Assy

AWZ7950 and AWZ7647 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7647	AWZ7950	
	Q656, Q660	Not used	2SA1048	*
	Q659	Not used	2SC2458	*
	Q661	Not used	XDC124ES	*
	D654	Not used	RD5.1ESB	*
	D655, D656	Not used	HSS104-02	*
	C1656	Not used	CKSQYB822K50	*
	R689, R699, R1656, R1658	Not used	RS1/10S102J	*
	R690, R1655, R1657	Not used	RS1/10S103J	*
	R693, R696	Not used	RS1/10S224J	*
	R695	Not used	RS1/10S821J	*
	Mini jack	Not used	AKN1020	*

*Note *: Refer to SCH-4.*

FL UCOM Assy

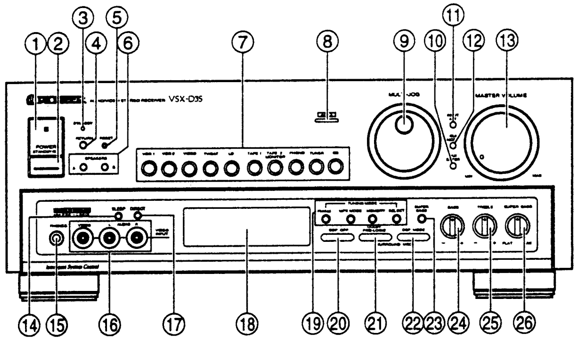
AWZ7653 and AWZ7652 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ7652	AWZ7653	
	D732	Not used	HSS104-02	*

*Note *: Refer to SCH-16.*

12. PANEL FACILITIES

FRONT PANEL FACILITIES



① Remote sensor

② POWER STANDBY/ON switch

This is the switch for electric power.

ON : When set to the ON position, power is supplied and the unit becomes operational.

STANDBY : When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

(Timer ON/OFF possible)

When the unit is switched ON, ON/OFF control can be performed by means of the optional timer.

NOTE:

- *When the power is initially turned ON, muting will be applied to prevent sound from being output for about 5 seconds.*
- *If the unit is on and you switch power off and then on again, it takes about three seconds for operation to resume. This is not a malfunction.*

③ STANDBY indicator

The STANDBY indicator lights when the power is set to STANDBY, and goes out when set to ON.

④ RETURN button

Press this button to return the receiver to its initial state. TUNER is selected at this initial state. Adjust the sound level by using the MASTER VOLUME control.

TAPE 2 MONITOR ...... OFF
DSP .... OFF
SUPER BASS .... OFF
MUTING .... OFF
FUNCTION .... TUNER

And SPEAKERS buttons switch as follows.

Before pressing the RETURN button		After pressing
Both A and B are off	⟶	Only A is on
Only A is on	⟶	No change
Only B is on	⟶	Both A and B are on
Both A and B are on	⟶	No change

NOTE:

Press the RETURN button, and the frequency last selected is received. If reception of the frequency last selected is not possible, the mode automatically switches to AUTO TUNING.

⑤ RESET button

Use this when normal operation is not possible because of external influences such as static electricity, lightning or when operations are not functioning even when operation buttons are pressed. Press this button to return to normal operating conditions.

(The input selector automatically switches to TUNER, and SPEAKERS button A is the only one on.

Also, the tuner station memory, surround settings, and remote control REMOTE SET UP settings are all returned to their initial defaults.)

If you press this button when the power is ON, the unit switches to POWER STANDBY.

⑥ SPEAKERS buttons (A, B)

On/off switches for the A and B speaker systems.

⑦ Input selector buttons

VCR 1 : Press when performing playback on a first VCR unit.
VCR 2 : Press when performing playback on a second VCR unit.
VIDEO : Press when performing playback on a TV camera or VCR connected to VIDEO INPUT jack on the front panel.
TV/SAT : Press to watch TV broadcasts from the TV tuner connected to the rear panel TV/SAT IN jacks.
LD : Press when performing playback on an LD player.
TAPE 1 : Press when performing playback on a cassette deck.
TAPE 2 MONITOR : Press when performing playback on a second cassette deck and when monitoring recording.
PHONO : Press when playing records on a turntable.
TUNER : Press when listening to radio broadcasts.
CD : Press when playing compact discs on a CD player.

⑧ AC-3 button**/indicator

Switches AC-3 (Dolby Surround AC-3) on and off. (When the input selector is set to a source other than LD or TV/SAT, it does not operate.)

No sound will be heard if you turn on this switch when playing an LD that does not use the AC-3 format.

** Setting is memorized separately for each input selector button.

⑨ MULTI-JOG

Use during tuner operation to select frequencies and station numbers. During GUI operation, use to move the on-screen cursor.

⑩ GUI ENTER button (GUI operation)

Press to execute an operation selected with the MULTI-JOG.

⑪ INPUT ATT button

Press on, and audio input sensitivity is attenuated (–10 dB) to prevent clipping due to excessively high input levels. Switch this on if the overload indicator in the display section lights during playback. When you switch it on, the ATT indicator lights.

NOTE:
Operates only when a DSP mode other than AC-3 is on.

⑫ GUI MODE button

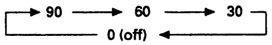
Switches GUI MODE on and off.

⑬ MASTER VOLUME control

Use it to simultaneously adjust the sound volume from the front, center, and rear speakers.

⑭ SLEEP button/indicator

Activates the SLEEP timer. The length changes in the following manner each time the button is pressed:



Unit: minutes

⑮ PHONES jack

Connect the plug on your headphones to this jack. Set SPEAKERS A and B switches to off if you want to cut the sound from the speakers and listen to it only through the headphones.

⑯ VIDEO INPUT jacks

VIDEO components such as a VCR or TV camera, etc. can be connected.

⑰ DIRECT button**/indicator

Press this to listen to source sound without passing the audio signal through sound quality and balance adjusting circuitry. DSP, super bass, rear and center speakers are automatically switched off.

⑱ Display section

See page 105.

⑲ TUNING MODE buttons

FM/AM button:
Use this to switch between FM and AM frequency band reception.

MPX MODE button:
Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the MONO indicator in the display section is lit.

Auto stereo mode
Normally, leave in this mode for reception. When a stereo FM broadcast is received, it will be automatically reproduced in stereo.

Monaural mode
When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

NOTE:
This button has no effect on reception of AM broadcasts.

MEMORY button:
Press this button to switch to the frequency preset mode.
(When GUI is on, it does not operate.)

SELECT button:
Press this button to switch to the station mode. Then you can turn the multi-jog to select a station.
(When GUI is on, it does not operate.)

⑳ DSP OFF button**

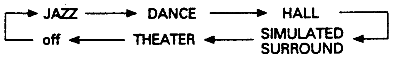
Switches DSP (㉒ DSP MODE, ㉑ DOLBY PRO-LOGIC, ⑧ AC-3) off.

㉑ DOLBY* PRO-LOGIC button**

Switches DOLBY PRO-LOGIC SURROUND on and off.

㉒ DSP MODE button**

Each time you press it, the mode and the display indications change as follows:



㉓ SUPER BASS button**

Press this button when you want to boost the bass.

㉔ BASS control

Use to adjust the low-frequency level. Turn clockwise to boost bass, and counterclockwise to attenuate bass.

㉕ TREBLE control

Use to adjust the high-frequency level. Turn clockwise to boost treble, and counterclockwise to attenuate treble.

㉖ SUPER BASS control

Use to adjust the bass boost level when the SUPER BASS button is set to on.

** Setting is memorized separately for each input selector button.

*

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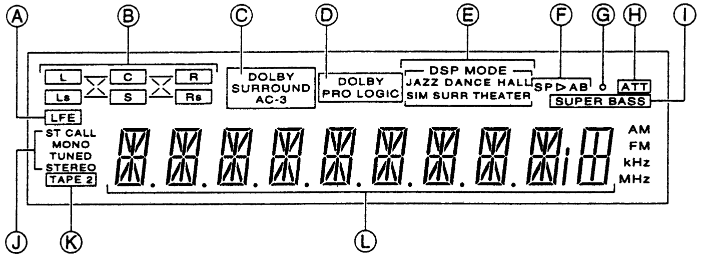
DISPLAY SECTION



Ⓐ LFE indicator

During Dolby AC-3 mode operation, if the LFE (Low Frequency Effect) channel is set in the program source, "LFE" lights, and if there is an LFE signal, a frame " ▭ " lights.

Ⓑ Dolby AC-3 channel indicator

During Dolby AC-3 mode operation, the channel set in the program source is indicated.

Ⓒ DOLBY SURROUND AC-3 indicator

Ⓓ DOLBY PRO LOGIC indicator

Ⓔ DSP MODE indicators

Ⓕ SP (SPEAKERS) A, B indicators

Shows which speaker system (or systems) are switched on.

Ⓖ Overload indicator

This lights when input signal level is excessive.
If it lights during playback, press the INPUT ATT button on, and the ATT indicator lights.
Operates only when a DSP mode other than AC-3 is on.

Ⓗ ATT indicator

This lights when the INPUT ATT button is on.

Ⓘ SUPER BASS indicator

This lights when the SUPER BASS button is on.

Ⓙ Tuning indicators

ST (STATION) CALL
: Press the SELECT button to switch to the station mode and this indicator lights.

MONO : Lights up when the FM MONO mode is selected with the MPX MODE button.

TUNED : Lights up when a station is tuned.

STEREO : Lights up when a stereo FM broadcast is being received.

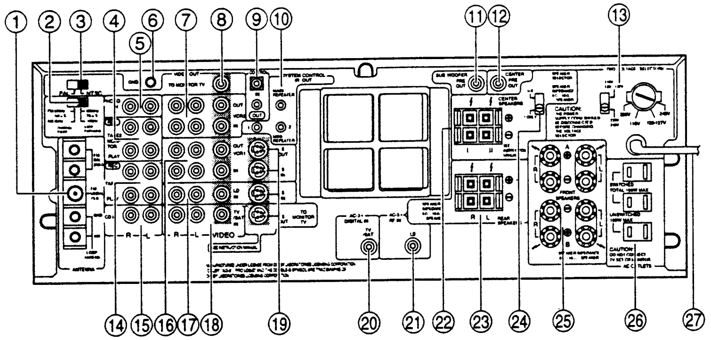
Ⓚ TAPE 2 indicator

Lights up when the input selector is set to TAPE 2 MONITOR on.

Ⓛ Character display

REAR PANEL FACILITIES

Illustration shows Multi-voltage model.



① FM/AM ANTENNA terminals
Use these antenna terminals for reception of normal FM and AM broadcasts.

② CHANNEL STEP switch (Multi-voltage model only)

③ PAL/NTSC switch (Multi-voltage model only)

④ TAPE 2 MONITOR jacks
Connect to audio components such as a second cassette deck or a graphic equalizer.

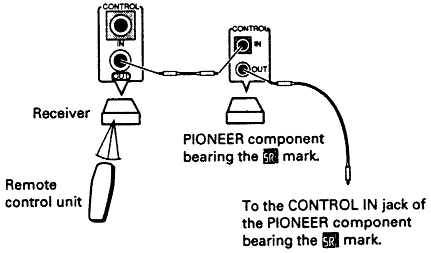
⑤ PHONO input jacks
Connect to the output cables from a turntable.

⑥ GND terminal
Connect the turntable ground lead to this terminal.

⑦ VCR 2 jacks
[VIDEO OUT]
Connect to the VCR 2 VIDEO INPUT jack.
[AUDIO OUT (L, R)]
Connect to the VCR 2 AUDIO INPUT jacks.
[VIDEO IN]
Connect to the VCR 2 VIDEO OUTPUT jack.
[AUDIO IN (L, R)]
Connect to the VCR 2 AUDIO OUTPUT jacks.

⑧ VIDEO OUT (TO MONITOR TV) jack
Connect to a monitor TV or to TV sets with video input terminals to watch program materials from a VCR or LD player connected to this unit.

⑨ CONTROL IN/OUT jacks
IN : Connect this jack to other Pioneer components when using those components to control this unit.
OUT : Connect this jack to other Pioneer components when using the remote control of this unit to control the other components.



PIONEER component bearing the SR mark.

Remote control unit

To the CONTROL IN jack of the PIONEER component bearing the SR mark.

NOTE:
- *If there is a plug in this unit's CONTROL IN jack, Intelligent System Control and GUI operation are not possible.*
- *The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point a remote control unit other than this unit's supplied remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.*
- *You cannot use the supplied remote control unit to operate this unit via another component's remote sensor.*

⑩ SYSTEM CONTROL IR OUT jacks
To operate other components with this unit's remote control or with GUI, connect the supplied repeater.
MINI-REPEATER 1, 2:
Connect the supplied Mini-Repeater.
MAIN-REPEATER:
Connect the supplied Main-Repeater.

⑪ SUB WOOFER PRE OUT jack
When you play back the low frequencies with a sub-woofer, connect to a powered sub-woofer.

⑫ CENTER PRE OUT jack
Connect when using a PIONEER projection monitor receiver's built-in speaker as a center speaker.
Refer to the projection monitor's operating instructions for details concerning connection and operation.

⑬ TWO VOLTAGE SELECTORS switches (Multi-voltage model only)

⑭ TAPE 1 jacks
Connect to the first cassette deck.

⑮ CD input jacks
Connect to the output jacks of a compact disc player.

⑯ VCR 1 jacks
[VIDEO OUT]
Connect to the VCR 1 VIDEO INPUT jack.
[AUDIO OUT (L, R)]
Connect to the VCR 1 AUDIO INPUT jacks.
[VIDEO IN]
Connect to the VCR 1 VIDEO OUTPUT jack.
[AUDIO IN (L, R)]
Connect to the VCR 1 AUDIO OUTPUT jacks.

⑰ LD input jacks
Connect to an LD player's output jacks (audio, video).

⑱ TV/SAT (Satellite) jacks (input)
Use these jacks if you wish to connect a TV tuner with both video and audio outputs.

⑲ S (connector) video jacks
When used in conjunction with a VCR, LD player or TV monitor equipped with S video jacks, connect to these jacks.

• TO MONITOR TV jack
This unit uses the TV screen to operate the system. Set the rear panel PAL/NTSC switch (③) to match your TV's color system (Multi-voltage model only). The screen will be unclear if the color system does not match.

⑳ AC-3 • DIGITAL IN (TV/SAT) jack
This jack is ready for future AC-3 system digital TV audio broadcasts.
NOTE:
Do not connect to a CD or DAT coaxial digital audio output.

㉑ AC-3 • RF IN (LD) jack
Connect to an LD player's AC-3 • RF OUT jack.

㉒ CENTER SPEAKERS terminals
Connect the center speaker(s) to these terminals.
NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other.
Use a center speaker with an impedance of 8 Ω to 16 Ω. (If you connect two center speakers, use speakers with an impedance of 4 Ω to 16 Ω. Refer to ㉔.)

㉓ REAR SPEAKERS terminals
Connect the rear speakers to these terminals.
NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other.
Use rear speakers with an impedance of 8 Ω to 16 Ω.

㉔ CENTER SPEAKER SELECTOR switch
This switch changes the speaker impedance when only one center speaker is connected, or two speakers are connected.
When only one speaker is connected:
Be sure to set the switch to "I ONLY" (down side), and always connect a speaker with an impedance of 8 Ω to 16 Ω to the I terminal.
When two speakers are connected:
Be sure to set the switch to "I + II" (up side), and always use speakers with an impedance of 4 Ω to 16 Ω.
NOTE:
Switch the CENTER SPEAKER SELECTOR when the unit power supply is at STANDBY. Do not switch the selector when the power supply is at ON.

㉕ FRONT SPEAKERS terminals
A : Connect to the first set of speakers.
B : Connect to the second set of speakers.
NOTE:
Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other.
Use front speakers with an impedance of 8 Ω to 16 Ω.

㉖ AC OUTLETS
(U.S. and Canadian models)
[SWITCHED TOTAL 100 W (0.8 A) MAX]
Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W (0.8 A).
[UNSWITCHED 100 W (0.8 A) MAX]
Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W (0.8 A).

(Multi-voltage model)
[SWITCHED TOTAL 100 W MAX]
Power supplied through these outlets is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.
[UNSWITCHED 100 W MAX]
Power flows continually to this outlet, regardless of whether the receiver is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W.

NOTE:
- *This unit should be disconnected by removing the power plug from the wall socket when not in regular use, e.g. when on vacation.*
- *Do not connect appliances with high power consumption such as heaters, irons or television sets to these AC OUTLETS in order to avoid overheating and fire risk. This can cause the receiver to malfunction.*

CAUTION:
DO NOT CONNECT A MONITOR OR TV SET TO THIS UNIT'S AC OUTLETS.

㉗ Power cord

13. SPECIFICATIONS (VSX−D3S)

Amplifier Section

<2-channel mode>

Continuous average power output of 130 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.05 % total harmonic distortion.**

<5-channel mode>

Continuous average power output of 100 watts* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.8 % total harmonic distortion.**

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.*

** *Measured by Audio Spectrum Analyzer.*

Continuous Power Output	
Front	100 W + 100 W (1 kHz, 0.8 %, 8 Ω)
Center	100 W (1 kHz, 0.8 %, 8 Ω)
Rear	100 W + 100 W (1 kHz, 0.8 %, 8 Ω)
[Multi-voltage model]	
Continuous Power Output (DIN)	
Front (1 kHz, T.H.D. 1 %, 8 Ω)	150 W + 150 W
Dynamic Power (2 Ω/4 Ω)	275 W/220 W
Input (Sensitivity/Impedance)	
PHONO MM	2.8 mV/47 kΩ
CD, TAPE 1, TAPE 2, LD, VCR 1, VCR 2, VIDEO, TV/SAT	200 mV/47 kΩ
Phono Overload Level (T.H.D. 0.1%, 1 kHz)	
PHONO MM	80 mV
Frequency Response	
PHONO MM	20 Hz to 20,000 Hz ± 0.3 dB
CD, TAPE 1, TAPE 2, LD, VCR 1, VCR 2, VIDEO, TV/SAT	5 Hz to 100,000 Hz $^{+0}_{-3}$ dB
Output (Level/Impedance)	
TAPE 1 REC, TAPE 2 REC	200 mV/2.2 kΩ
VCR 1 OUT, VCR 2 OUT	200 mV/2.2 kΩ
Tone Control	
BASS	±8 dB (150 Hz)
TREBLE	±8 dB (10 kHz)
SUPER BASS	0 ~ +8 dB (80 Hz, variable)
Signal-to-Noise Ratio (IHF, short circuited, A network)	
PHONO MM	76 dB
CD, TAPE 1, TAPE 2, LD, VCR 1, VCR 2, VIDEO, TV/SAT	98 dB
Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]	
PHONO MM	77 dB
CD, TAPE 1, TAPE 2, LD, VCR 1, VCR 2, VIDEO, TV/SAT	80 dB

VIDEO Section

Input (Sensitivity/Impedance)	
VCR 1, VCR 2, LD, VIDEO, TV/SAT	1 Vp-p/75 Ω
Output (Level/Impedance)	
VCR 1, VCR 2, MONITOR	1 Vp-p/75 Ω
Frequency Response	
VCR 1, VCR 2, LD, VIDEO → MONITOR	5 Hz to 10 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio	55 dB
Cross Talk	55 dB

AC-3 Input Section

AC-3 • RF (LD)	1
AC-3 • DIGITAL (TV/SAT)	1

FM Tuner Section

Frequency Range	87.5 MHz to 108 MHz
Usable Sensitivity	Mono: 11.2 dBf, IHF (1.0 µV/75 Ω)
50 dB Quieting Sensitivity	Mono: 16.8 dBf Stereo: 38.6 dBf
Signal-to-Noise Ratio	Mono: 80 dB (at 65 dBf) Stereo: 76 dB (at 85 dBf)
Distortion	Stereo: 0.3 % (1 kHz)
Alternate Channel Selectivity	65 dB (400 kHz)
Stereo Separation	45 dB (1 kHz)
Frequency Response	30 Hz to 15 kHz ($^{+0.8}_{-3.0}$) dB
Antenna Input	300 Ω balanced 75 Ω unbalanced

AM Tuner Section

Frequency Range	531 kHz to 1,602 kHz (9 kHz step) 530 kHz to 1,700 kHz (10 kHz step)
Sensitivity (IHF, Loop antenna)	300 µV/m
Selectivity	25 dB
Signal-to-Noise Ratio	50 dB
Antenna	Loop antenna

Miscellaneous

Power Requirements	
U.S. and Canadian models	AC 120 V, 60 Hz
Multi-voltage model	AC 110 V/120-127 V/220 V/240 V (Switchable), 50/60 Hz
Power Consumption	
U.S. and Canadian models	455 W, 700 VA
Multi-voltage model	1175 W
In Standby Condition	5 W
AC Outlets	
U.S. and Canadian models	
SWITCHED x 2	TOTAL 100 W (0.8 A) MAX
UNSWITCHED x 1	100 W (0.8 A) MAX
Multi-voltage model	
SWITCHED x 2	TOTAL 100 W MAX
UNSWITCHED x 1	100 W MAX
Dimensions	420 (W) x 162 (H) x 425 (D) mm 16-9/16 (W) x 6-3/8 (H) x 16-3/4 (D) in
Weight (without package)	
U.S. and Canadian models	15.0 kg (33 lb 1 oz)
Multi-voltage model	15.2 kg (33 lb 8 oz)

Furnished Parts

FM T-type Antenna	1
AM Loop Antenna	1
Dry Cell Batteries (size "AA" IEC R6P)	2
Remote Control Unit	1
Main-Repeater	1
Mini-Repeater	1
Operating Instructions	1

NOTE:

Specifications and the design are subject to possible modifications without notice, due to improvements.